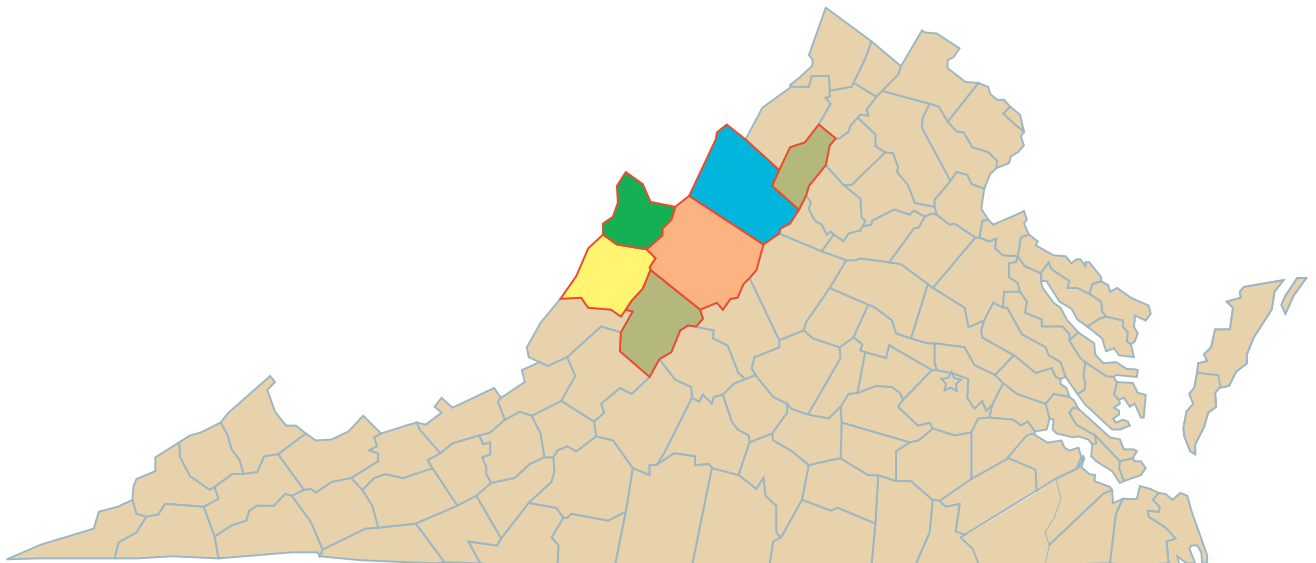
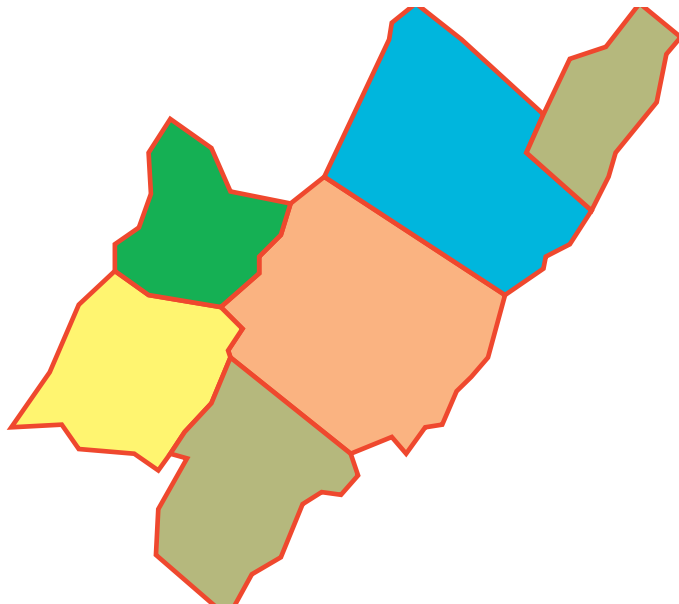
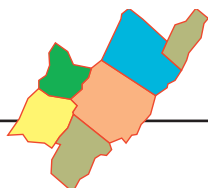


Community Profile of WIA IV

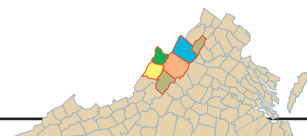
Augusta County • Bath County • Highland County • Page County • Rockbridge County
• Rockingham County • City of Buena Vista • City of Harrisonburg • City of Lexington •
City of Staunton • City of Waynesboro



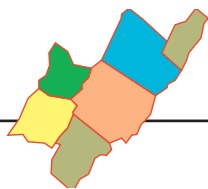


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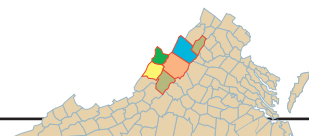
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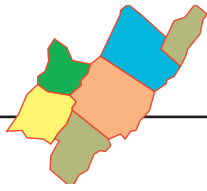


I. Executive Summary

This report provides a demographic, economic, and educational profile of Workforce Investment Area IV (WIA IV), Shenandoah Valley. The purpose of these profiles is to assist on-going strategic planning efforts by providing a solid, data-driven, foundation for strategic decision-making. The primary findings from this report are:

- Between 2000 and 2010, WIA IV will experience a major increase in its 55 and over population. The net result of this trend will be a significant “graying” of the overall population.
- One implication of this trend is that younger entry-level workers will be in short supply.
- WIA IV is experiencing, and will likely continue to experience, a shift away from employment in Manufacturing and toward employment in Services and Retail Trade.
- One implication of this shift is that the Service sector – specifically, health care and education – is expected to account for much of the demand for trained workers between 1998 and 2008.
- Another implication is likely downward pressure on wages. Whereas Manufacturing comprised the 6th highest wage sector in the local economy, Retail Trade ranks 18th, Health 13th, and Education 11th.

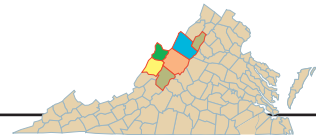


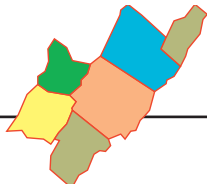


I. Introduction

This report provides a community profile of Workforce Investment Area IV (WIA IV). It was produced by the Virginia Employment Commission, with assistance from the Virginia Community College System and the Virginia Economic Development Partnership, at the request of the Special Advisor to the Governor for Workforce Development. It is intended to assist on-going strategic planning efforts within the Workforce Investment Boards by providing a solid, data-driven, foundation for strategic decision-making.

The report is divided into four major sections. The first contains a profile of regional demographic characteristics and trends, the second supplies similar information for the regional economy, and the third provides a profile of regional education characteristics and projected demands for training and skills. These are followed by a summary and conclusion section.

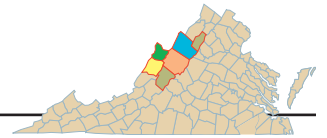




II. Demographic Profile

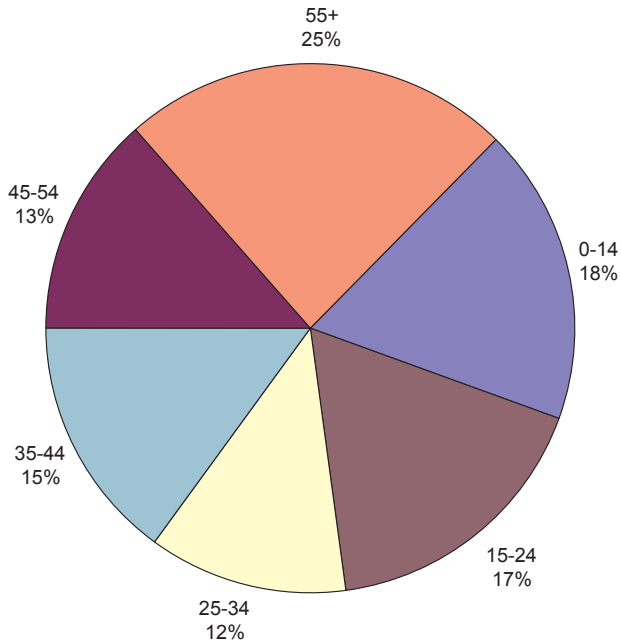
Population demographics are the single most important factor affecting WIA IV's future labor force. Some key features of the area's population are as follows:

- Tends to be slightly older. Where statewide individuals who are 55 and older comprise 20 percent of the population, in WIA IV they comprise 25 percent of the population.
- Smaller proportion of minorities. Where statewide minorities comprise 28 percent of the overall population, in WIA IV they comprise eight percent of the population.
- Projected to increase by 18,849 persons (or 6.7 percent) between 2000 and 2010. The largest increase is expected in Rockingham County (6,175), followed by the city of Harrisonburg (6,147), and Augusta County (5,685). The cities of Staunton and Buena Vista, and Highland County are projected to lose population over the period (-1,353, -249 and -36 respectively).
- Smaller proportion of individuals who "speak English less than well". Where statewide the proportion of individuals five and older who speak English less than well is 2.2 percent, in WIA IV it is 1.5 percent.
- The city of Harrisonburg draws the largest number of in-commuters (19,099) of any locality within WIA IV, followed by Augusta County (10,615) and Rockingham County (9,348). In all cases, the majority of these commuters originate from within WIA IV. On the whole, WIA IV is a net exporter of workers with 7,826 individuals commuting into the area for work, while 9,830 of the area's residents commute to localities outside of WIA IV for work.

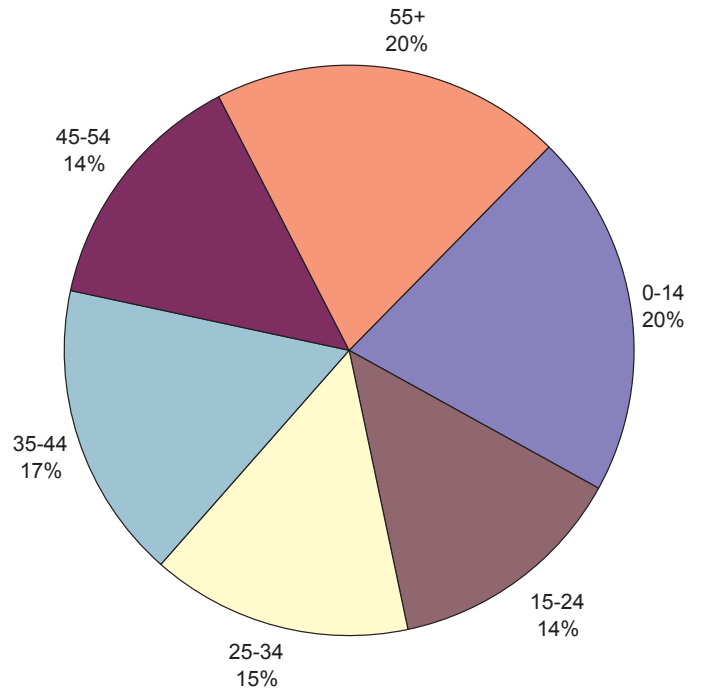


Population by Age Cohort

WIA IV



Virginia



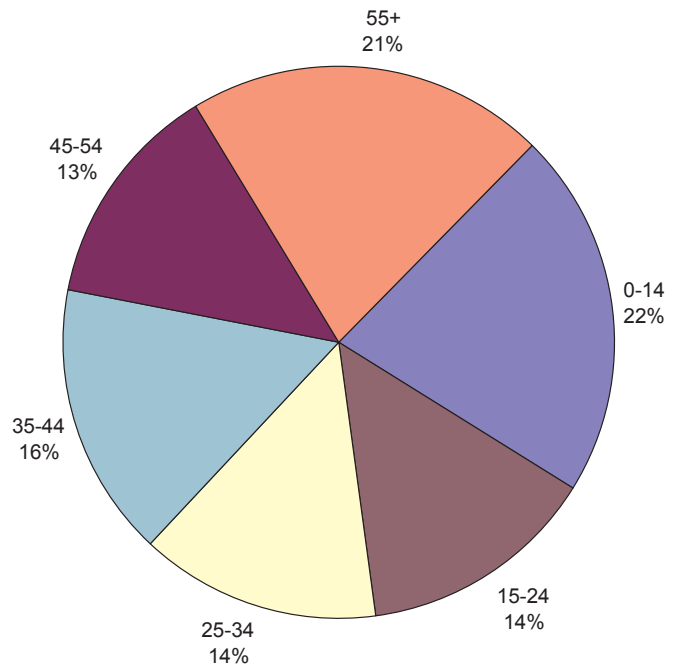
WIA IV

0-14	50,861
15-24	48,971
25-34	34,469
35-44	42,117
45-54	38,053
55+	67,480
Total	281,951

Virginia

0-14	1,453,452
15-24	963,469
25-34	1,036,911
35-44	1,200,950
45-54	999,548
55+	1,424,169
Total	7,078,494

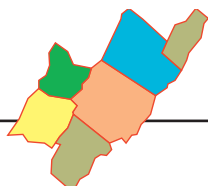
United States



United States

0-14	60,253,375
15-24	39,183,890
25-34	39,891,724
35-44	45,148,527
45-54	37,677,952
55+	59,266,437
Total	281,421,906

Subparts may not add to total due to rounding.
Source: 2000 Census.

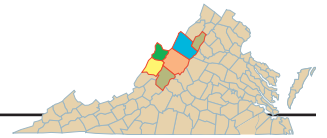


Population by Race/Ethnicity

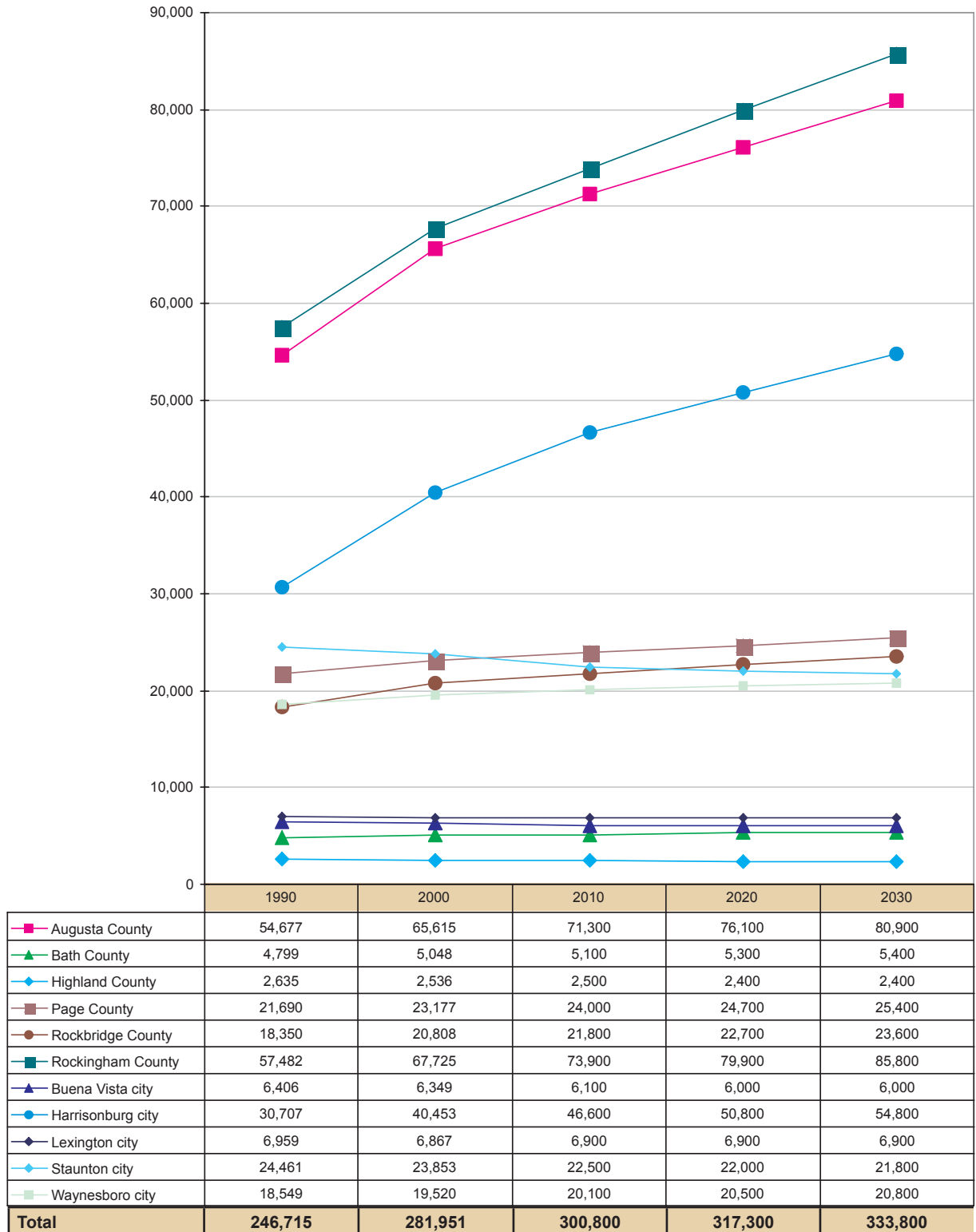
WIA IV		
Total Population	281,966	100.0%
Race		
White	260,019	92.2%
Black or African American	13,406	4.8%
American Indian and Alaska Native	514	0.2%
Asian	2,191	0.8%
Native Hawaiian and Other Pacific Islander	52	—
Other and Multi-Race	5,784	2.1%
Ethnicity		
Hispanic or Latino (of any race)	7,904	2.8%

Virginia		
Total Population	7,078,515	100.0%
Race		
White	5,120,110	72.3%
Black or African American	1,390,293	19.6%
American Indian and Alaska Native	21,172	0.3%
Asian	261,025	3.7%
Native Hawaiian and Other Pacific Islander	3,946	0.1%
Other and Multi-Race	281,969	4.0%
Ethnicity		
Hispanic or Latino (of any race)	329,540	4.7%

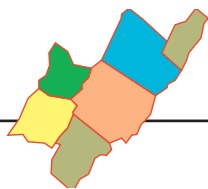
United States		
Total population	281,421,906	100.0%
Race		
One race	274,595,678	97.6%
White	211,460,626	75.1%
Black or African American	34,658,190	12.3%
American Indian and Alaska Native	2,475,956	0.9%
Asian	10,242,998	3.6%
Native Hawaiian and Other Pacific Islander	398,835	0.1%
Other and Multi-Race	22,185,301	7.9%
Ethnicity		
Hispanic or Latino (of any race)	35,305,818	12.5%



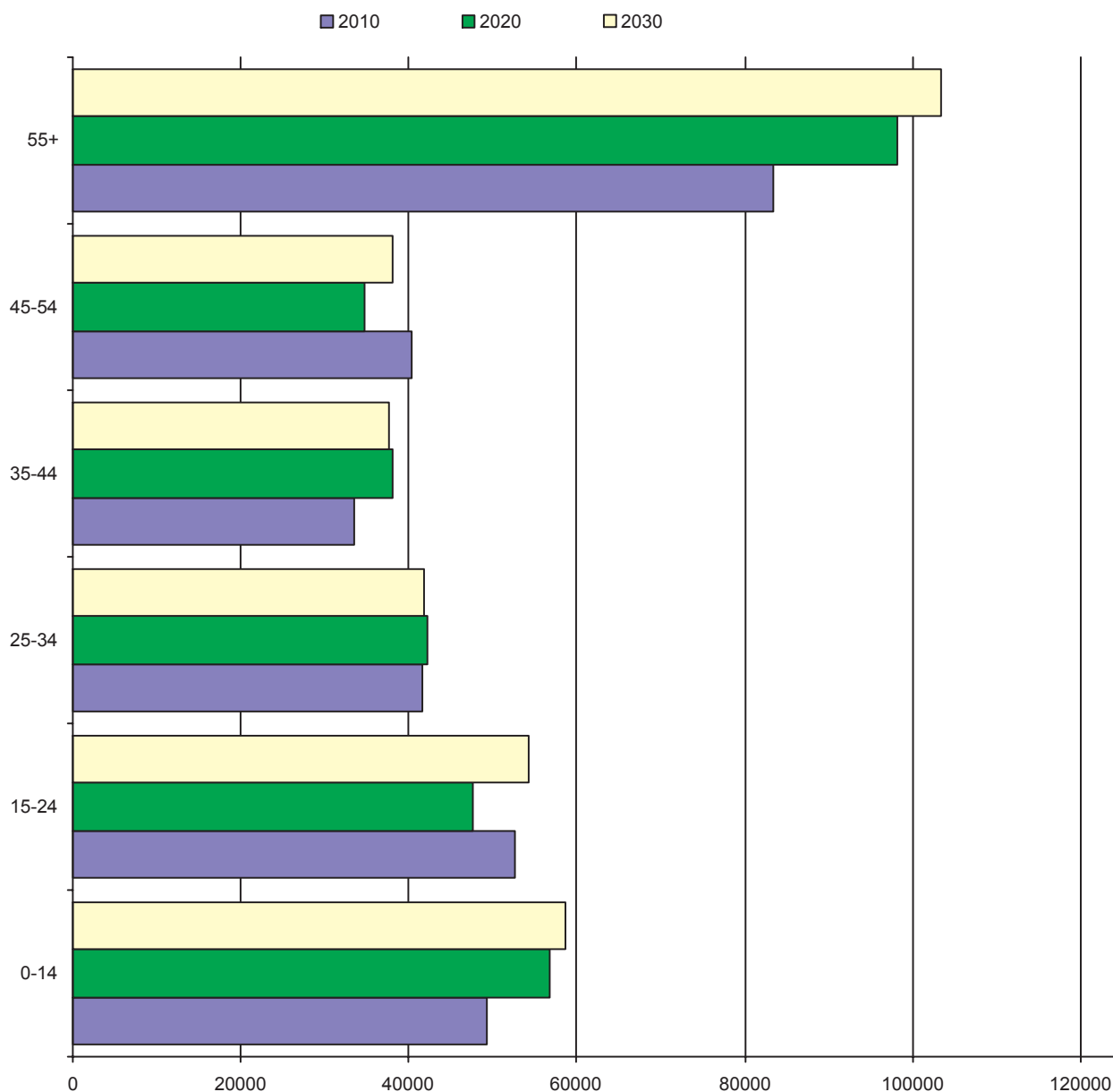
Population Change



Data for 2010 - 2030 are projections. Subparts may not add to total due to rounding.
Source: Virginia Employment Commission, 08/03, U.S. Census Bureau.



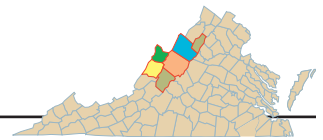
Population Projections by Age Cohort



	2010	2020	2030
0-14	49,328	56,696	58,595
15-24	52,700	47,648	54,369
25-34	41,623	42,126	41,753
35-44	33,412	37,985	37,593
45-54	40,435	34,681	38,076
55+	83,302	98,165	103,414
Total	300,800	317,300	333,800

Subparts may not add to total due to rounding.

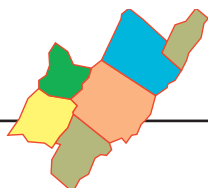
Source: Virginia Employment Commission.



English Language Skills

(Age 5 and over)

WIA IV		
	Total	Speak English less than well
Augusta County	61,958	291
Bath County	4,823	22
Highland County	2,443	9
Page County	21,900	159
Rockbridge County	19,712	89
Rockingham County	63,473	1,168
Buena Vista city	5,980	13
Harrisonburg city	38,524	1,755
Lexington city	6,656	34
Staunton city	22,570	121
Waynesboro city	18,289	229
WIA IV	266,328	3,890
Virginia	6,619,266	143,865
<i>Percent of Individuals who speak English less than well</i>		
Virginia	2.17%	
WIA IV	1.46%	



Commuting Patterns¹

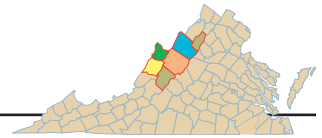
	In-Commute (10)										
	Augusta	Bath	Highland	Page	Rockbridge	Rockingham	Buena Vista	Harrisonburg	Lexington	Staunton	Waynesboro
Augusta		27	22		466	1,926	47	2,081	46	5,173	4,626
Bath	174		55		26	8		24	6	42	6
Highland	67	86				32		23		26	7
Page	129					987		887			31
Rockbridge	580	30				66	923	23	1,941	174	99
Rockingham	1,442	20	7	402	35		5	13,514	24	294	218
Buena Vista	109				1,173	26		13	297	30	57
Harrisonburg	402			22	14	3,758	7		6	153	96
Lexington	21				984	13	27	6		14	8
Staunton	3,978				66	300	6	373	14		760
Waynesboro	2,650				38	107	10	152		642	
Total To County/City From WIA IV	9,552	163	84	424	2,802	7,223	1,025	17,096	2,334	6,548	5,908
Other VA Localities	1,034	309	26	240	550	1,448	71	1,526	185	302	688
West Virginia	29	75	44		12	677		443	6		
Other Out of State		13	27	9	59			34	19		
Total to County/ City:	10,615	560	181	673	3,423	9,348	1,096	19,099	2,544	6,850	6,596
Total In State	10,586	472	110	664	3,352	8,671	1,096	18,622	2,519	6,850	6,596
Total Out of State	29	88	71	9	71	677	0	477	25	0	0

Source: "In-Commuting Patterns" and "Out-Commuting Patterns," 2000 Census data, Virginia Employment Commission, http://www.vec.state.va.us/vecportal/lbrmkt/lmi_menu.cfm

1. Empty cells within the table indicate that the area's commuting represents less than .2% of total commuting or may be zero.
2. Total Commuting to/from WIA= Other VA Localities + Out of State

Example of how to use the Commuting Patterns table:

"How many of Suffolk's residents commute to Chesapeake County?" On the horizontal or To axis, locate the column labeled Chesapeake. On the vertical or From axis, locate the row labeled Suffolk. The intersection of the row and column, 1,850, is the number of Suffolk's residents that commute to Chesapeake County.



Commuting Patterns¹

Out-Commute (From)		Total From County/ City To WIA IV	Other VA Localities	West Virginia	Other Out of State	Total From County/ City:	Total In State	Total Out of State
	Augusta	14,414	1,976			16,390	16,390	0
	Bath	341	325		39	705	666	39
	Highland	241	9	40	9	299	250	49
	Page	2,034	1,884		186	4,104	3,918	186
	Rockbridge	3,836	655		60	4,551	4,491	60
	Rockingham	15,961	1,800		62	17,823	17,761	62
	Buena Vista	1,705	158		7	1,870	1,863	7
	Harrisonburg	4,458	888	27	91	5,464	5,346	118
	Lexington	1,073	99		25	1,197	1,172	25
	Staunton	5,497	404			5,901	5,901	0
	Waynesboro	3,599	1,070		16	4,685	4,669	16

Total To
County/City From
WIA IV

Other VA
Localities

West Virginia

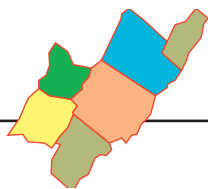
Other Out of
State

**Total to
County/ City:**

Total In State

Total Out of State

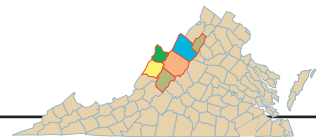
Total WIA Commuting ²	
Total Commuting To WIA:	7,826
Total Commuting From WIA:	9,830



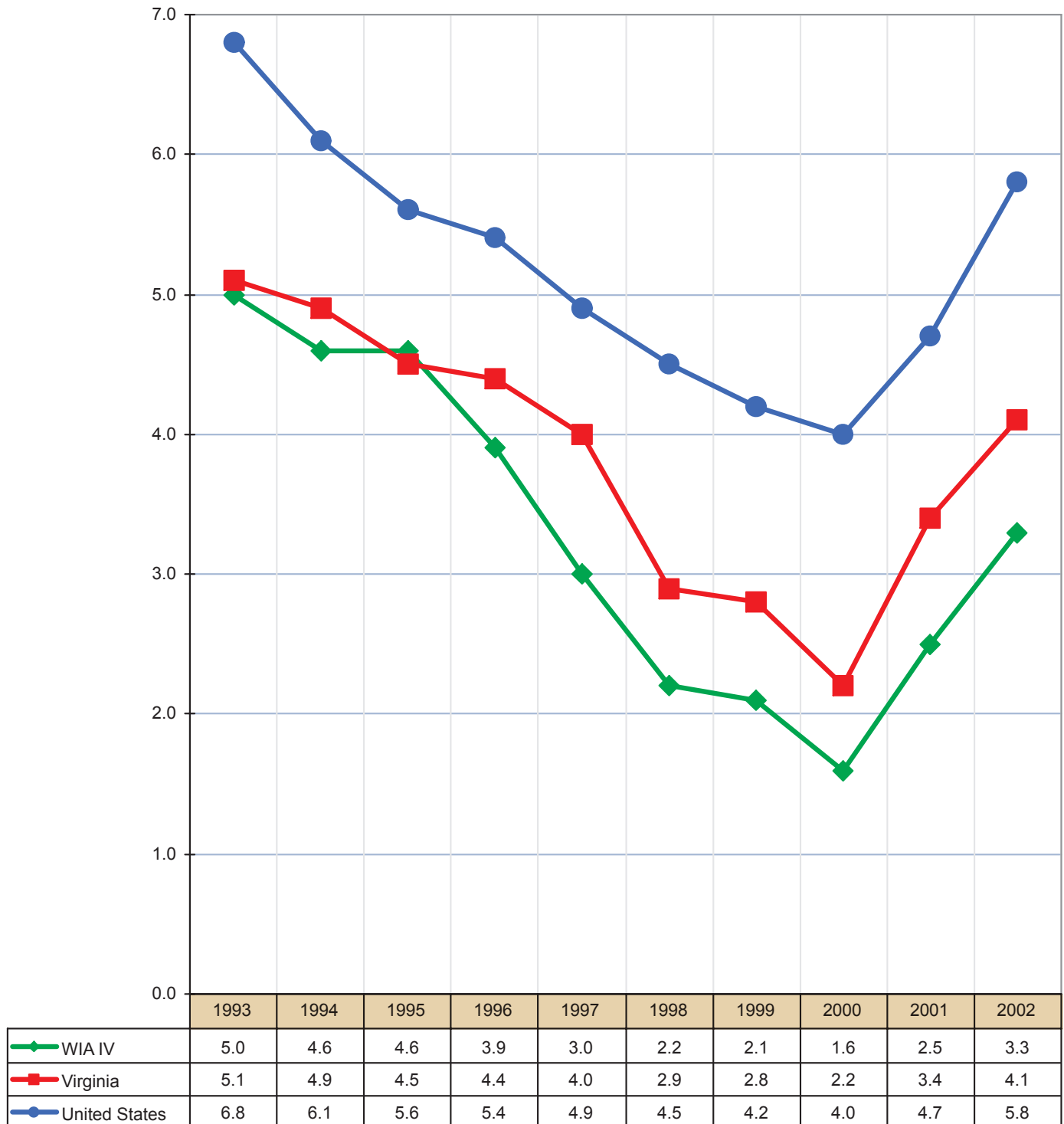
III. Economic Profile

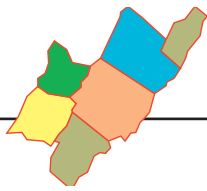
Where population demographics provide information on underlying trends within the labor force, economic data provides more detailed information on the likely demand for specific types of workers. Some key features of WIA IV's economy are as follows:

- Unemployment rates are below the statewide average. Since 1996, WIA IV's unemployment rate has consistently been between 0.5 and 1.0 percent below the statewide average.
- Employment is concentrated in Manufacturing (23.5 percent), Government (16.9 percent), and Retail Trade (12.2 percent).
- Most new hires have been in Retail Trade (34.3 percent), Services (31.5 percent), and Manufacturing (12.8 percent).
- Overall personnel turnover is slightly below the statewide average (12.1 percent vs. 13.2 percent). Personnel turnover tends to be highest in Retail Trade (14.6 percent), followed by Services (14.1 percent) and Agriculture, Forestry, and Fishing (13.3 percent).
- Weekly wages were highest in Utilities (\$1,038), followed by Management (\$865), Federal Government (\$729), Mining (\$671), Finance/Insurance (\$667), and Manufacturing (\$664).
- Industries with the largest proportion of workers at or near retirement age (55 and above) are Mining (19.5 percent), Finance, Insurance, and Real Estate (19.4 percent), Wholesale Trade (18.7 percent), and Services (17.6 percent).
- Employment projections indicate that between 1998 and 2008, most employment growth will occur in Services (24,790 additional jobs) and Retail Trade (8,677 additional jobs). In contrast, Agriculture, Forestry, and Fishing is projected to lose 1,093 jobs.
- Employment projections also indicate that between 1998 and 2008, the biggest growth in occupational employment will be in Secondary School Teachers (1,900 openings), Guards (1,310 openings), Telemarketers (770 openings), Teacher's Aides (670 openings), and Systems Analysts (550 openings). Alternatively, the biggest declines in occupational employment will be in Sewing Machine Operators, Private Cleaners and Servants, and Machine Tool Cutting Operators.
- Based on January 2004 Unemployment data, the largest pools of available workers are in the Office and Administrative Support, Production, Construction and Extraction, Sales, and Transportation and Materials Moving occupations.



Unemployment Rate Trends



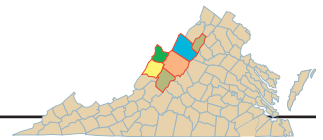


Employers by Size of Establishment

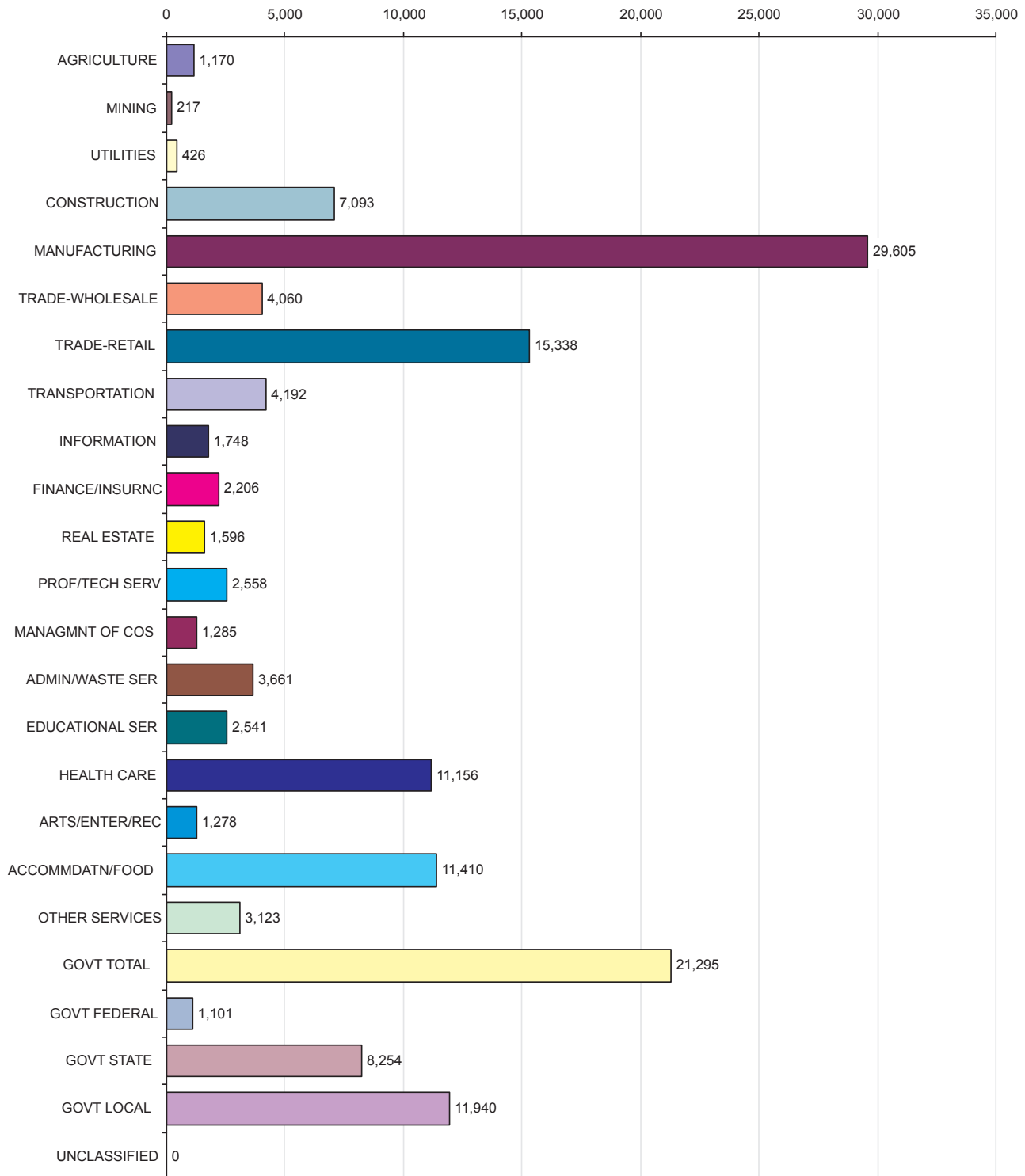
Number of Employees	WIA IV	Virginia
0 - 4	3,644	107,195
5 - 9	1,457	35,763
10 - 19	948	25,141
20 - 49	707	18,074
50 - 99	212	6,136
100 - 249	92	3,388
250 - 499	39	1,029
500 - 999	19	409
1000 +	13	229
TOTAL	7,131	197,364

Employment by Size of Establishment

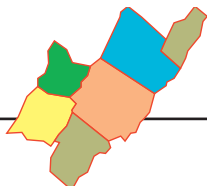
Number of Employees	WIA IV	Virginia
0 - 4	7,250	188,377
5 - 9	9,702	238,634
10 - 19	12,866	340,363
20 - 49	21,282	553,221
50 - 99	14,759	422,392
100 - 249	13,530	503,348
250 - 499	13,426	352,727
500 - 999	13,004	274,493
1000 +	19,893	543,583
TOTAL	125,712	3,417,138



Employment by Industry

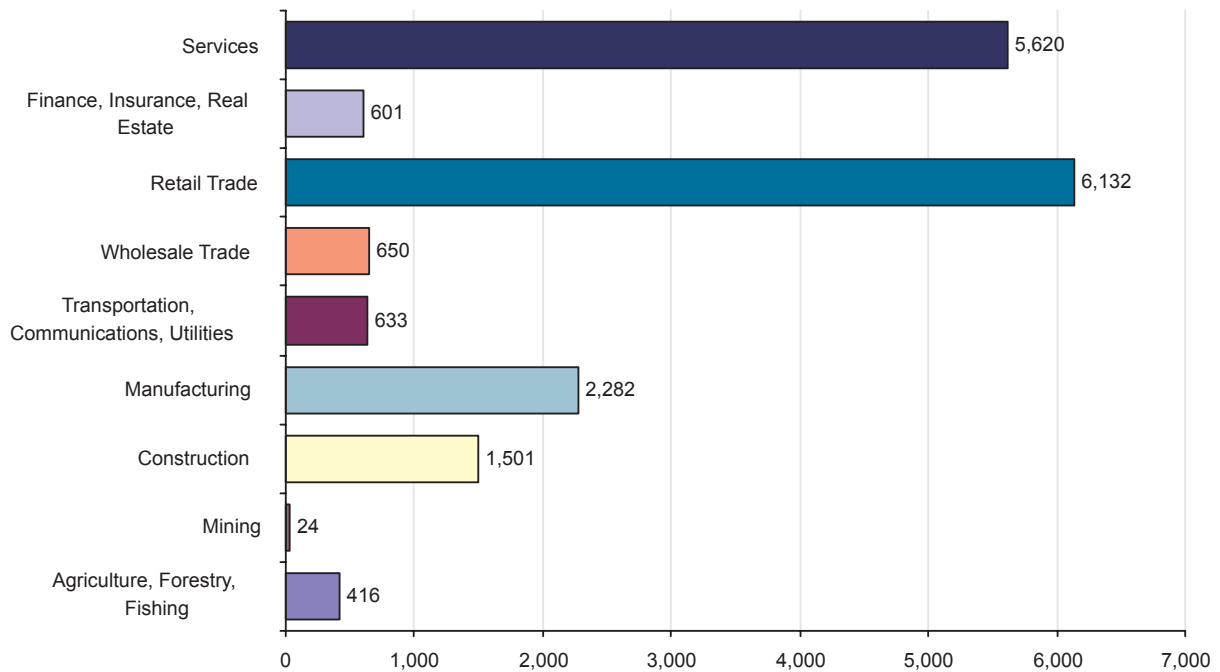


Total: 125,955



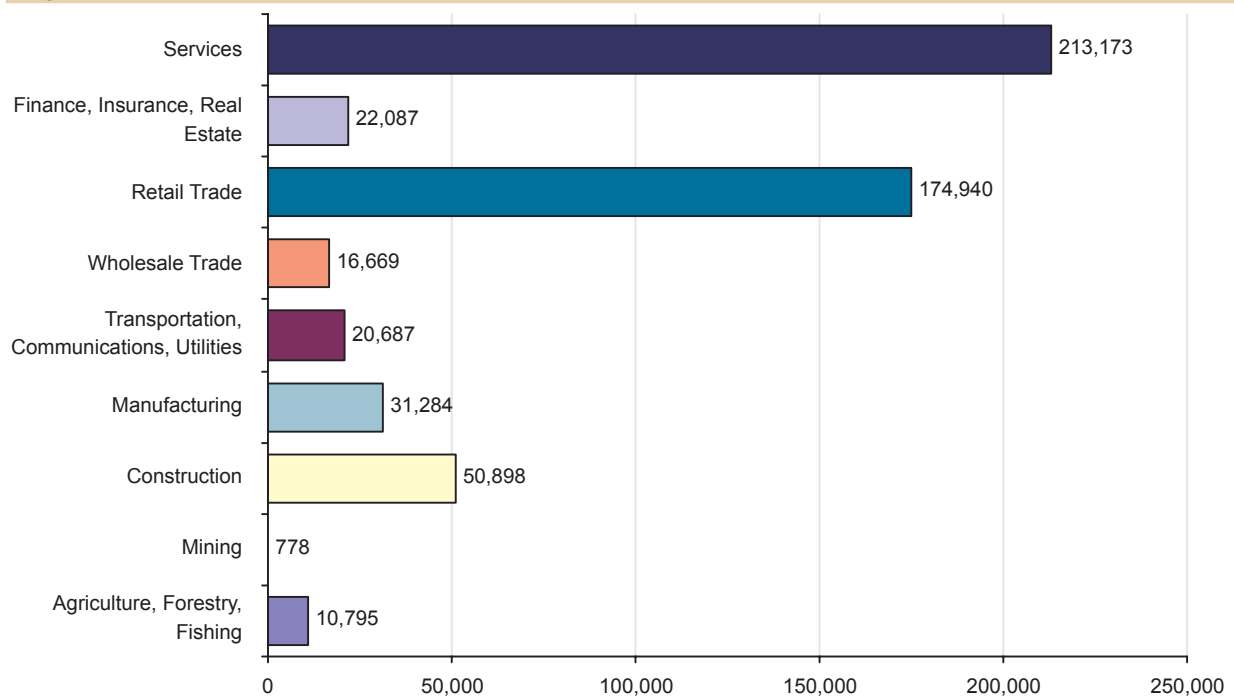
New Hires by Industry

WIA IV

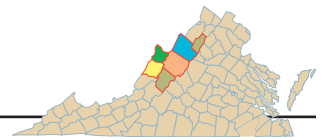


Total: 17,862

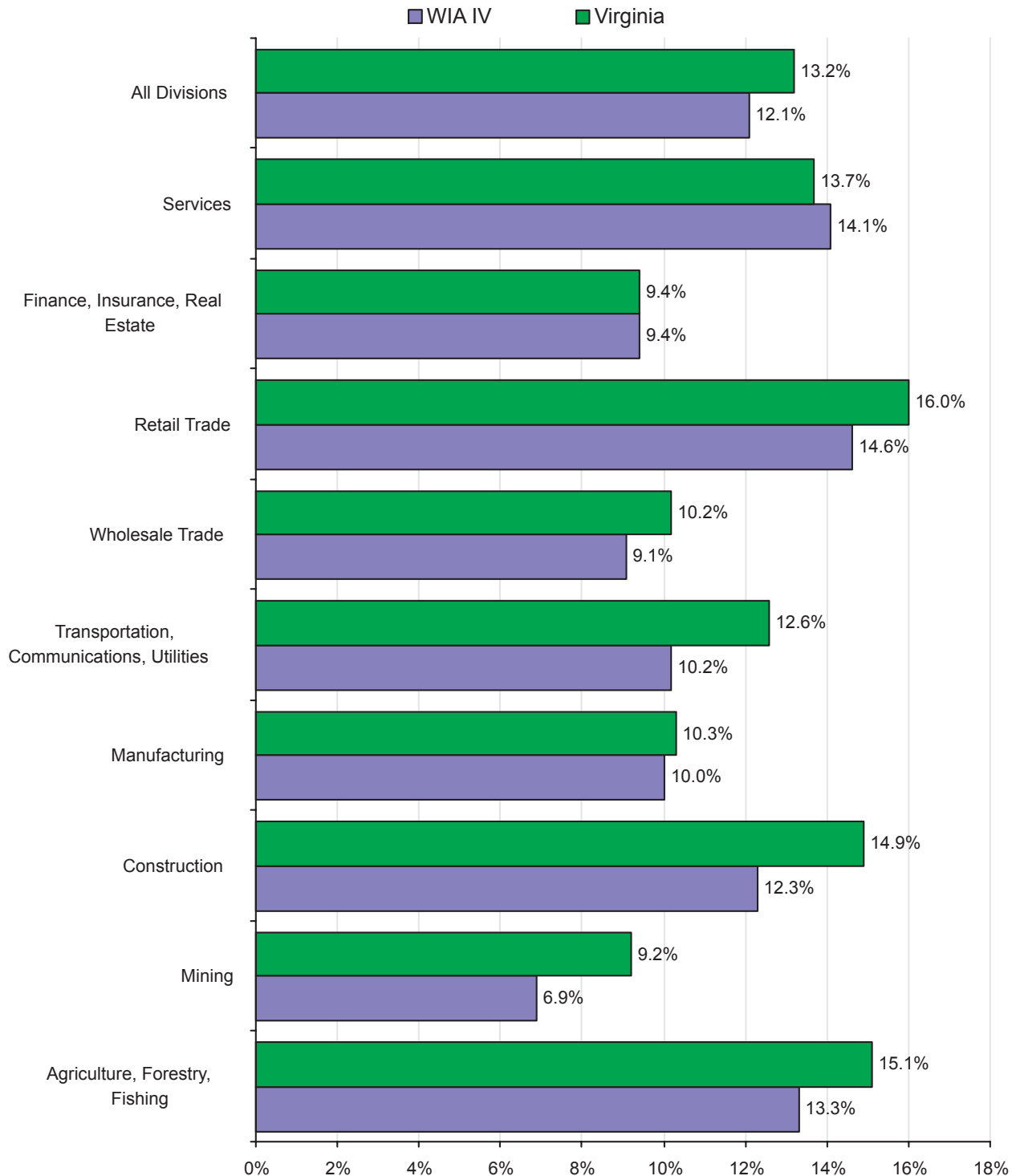
Virginia



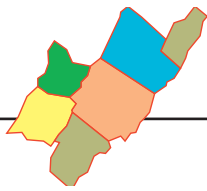
Total: 541,323



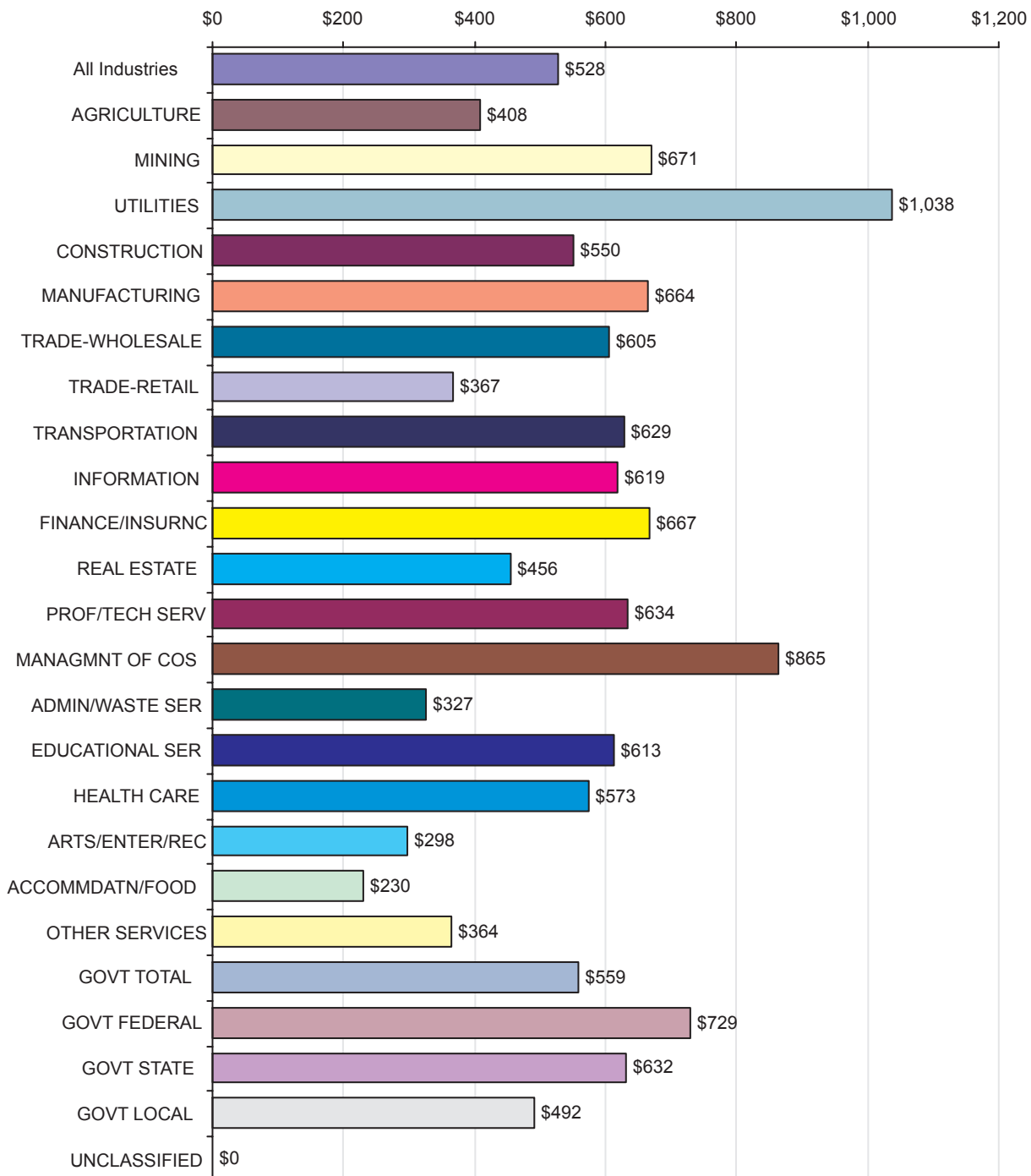
Turnover by Industry



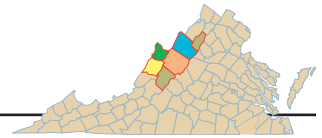
Source: U.S. Census Bureau, Local Employment Dynamics (LED) Program, 2002 annual averages.



Average Weekly Wage by Industry



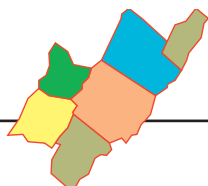
Source: Covered Employment and Wages, annualized 2002.



Age of Workers by Industry

■ WIA IV
 ■ Virginia

	14 - 18	19 - 21	22 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65 - 99	14 - 99
Total Employment	4,475	6,914	7,121	22,391	26,139	21,763	11,560	3,746	104,109
	106,356	162,652	180,601	659,050	739,013	576,728	282,064	81,995	2,788,457
Agriculture, Forestry, and Fishing	128	141	166	466	466	392	169	91	2,019
	2,219	3,048	3,158	9,842	9,481	6,372	2,705	1,600	38,424
Mining	0	7	7	49	77	59	36	12	246
	22	221	366	1,702	2,803	3,498	1,129	136	9,876
Construction	177	441	509	1,759	2,089	1,510	720	198	7,401
	3,907	10,799	13,521	50,770	61,204	41,178	18,359	6,009	205,745
Manufacturing	228	1,134	1,573	6,968	8,795	6,870	3,425	485	29,478
	2,142	9,334	14,693	72,949	106,504	94,364	46,938	7,579	354,504
Transportation, Communications, and Utilities	42	151	324	1,163	1,371	1,283	640	174	5,146
	1,059	4,542	8,097	42,450	52,051	40,960	16,851	3,199	169,208
Wholesale Trade	111	253	306	1,164	1,414	1,144	655	356	5,403
	1,691	4,449	6,486	33,407	43,317	32,948	15,708	4,557	142,564
Retail Trade	2,641	2,906	2,234	4,764	4,749	3,760	2,001	931	23,985
	67,335	76,880	57,338	136,252	130,099	94,331	48,135	20,155	630,522
Finance, Insurance, and Real Estate	58	177	244	737	846	793	515	172	3,540
	1,775	7,281	13,158	53,760	56,683	42,503	20,070	5,079	200,308
Services	1,091	1,704	1,759	5,322	6,334	5,953	3,399	1,330	26,891
	26,206	46,097	63,782	257,918	276,866	220,571	112,170	33,682	1,037,291



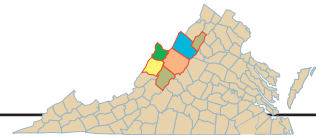
Total Employment by Industry

	Employment			Percent Change	
	Esti- mated 1998	Pro- jected 2008	Change	Total	Annual
Total All Industries	220,026	257,047	37,021	16.83%	1.57%
Agriculture, Forestry and Fishing, Total	13,900	12,807	-1,093	-7.86%	-0.82%
Mining, Total	569	504	-65	-11.42%	-1.21%
Construction, Total	12,545	13,717	1,172	9.34%	0.90%
Manufacturing, Total	55,437	56,036	599	1.08%	0.11%
Durable Goods Manufacturing, Total	19,923	19,618	-305	-1.53%	-0.15%
Nondurable Goods Manufacturing, Total	35,514	36,418	904	2.55%	0.25%
Transportation and Public Utilities, Total	10,174	10,845	671	6.60%	0.64%
Transportation, Total	6,516	7,092	576	8.84%	0.85%
Communications and Utilities, Total	3,658	3,753	95	2.60%	0.26%
Wholesale and Retail Trade, Total	46,607	55,780	9,173	19.68%	1.81%
Wholesale Trade, Total	7,697	8,193	496	6.44%	0.63%
Retail Trade, Total	38,910	47,587	8,677	22.30%	2.03%
Finance, Insurance, and Real Estate, Total	5,908	6,473	565	9.56%	0.92%
Services, Total	62,812	87,602	24,790	39.47%	3.38%
Federal Government (Except Post Office)	1,009	918	-91	-9.02%	-0.94%
State Government (Except Education and Hospitality)	3,934	4,354	420	10.68%	1.02%
Local Government (Except Education and Hospitality)	7,131	8,011	880	12.34%	1.17%

Employment by Major Occupation Group

	Employment			Openings		
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total
Total, All Occupations	219,984	257,017	16.83%	53,580	37,033	90,680
Executive, Administrative and Managerial Occupations	13,425	15,622	16.36%	2,400	2,197	4,580
Professional Specialty Occupations	38,008	49,573	30.43%	7,580	11,565	19,210
Marketing and Sales Occupations	24,410	30,147	23.50%	7,570	5,737	13,310
Administrative Support Occupations, Clerical	28,481	32,737	14.94%	5,970	4,256	10,220
Service Occupations	30,866	38,740	25.51%	9,970	7,874	17,900
Agriculture, Forestry, and Fishing Occupations	12,875	12,202	-5.23%	3,590	-673	3,590
Precision Production, Craft and Repair Occupations	25,355	27,472	8.35%	5,920	2,117	8,000
Operators, Fabricators, and Laborers	46,564	50,524	8.50%	10,580	3,960	14,540

Source: Industry and Occupational Employment Projections, 1998 — 2008.
Projections are for the Northwest Virginia Non-Metropolitan Region (Region 4).



Growth Occupations

	Employment			Openings			Wages
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total	Median Annual Wage
Telemarketers Door-to-Door Sales	554	1,182	113.36%	140	628	770	\$23,710*
Systems Analysts	523	1,038	98.47%	30	515	550	\$52,922
Computer Support Specialists	426	843	97.89%	30	417	450	\$31,613
Guards	1,276	2,267	77.66%	320	991	1,310	\$19,075
Health Diagnostics Teachers, Pstscndry	201	351	74.63%	60	150	210	\$59,170*
Sales Agents, Business	291	498	71.13%	60	207	270	\$29,621
Computer Engineers	361	603	67.04%	20	242	260	\$67,094
Home Health Aides	567	927	63.49%	80	360	440	\$17,690
Dental Assistants	308	497	61.36%	50	189	240	\$21,738
Dental Hygienists	168	271	61.31%	40	103	140	\$62,060*
Medical Assistants	348	561	61.21%	90	213	300	\$18,599
Teachers Aides, Paraprofessional	982	1,539	56.72%	110	557	670	\$18,860*
Teachers, Special Education	635	995	56.69%	50	360	410	\$36,122
Residential Counselors	236	352	49.15%	50	116	170	\$15,411
Teachers Aides & Educational Assts	490	719	46.73%	60	229	290	\$15,229
Computer Programmers	412	603	46.36%	130	191	320	\$41,206
Teachers, Secondary School	2,509	3,604	43.64%	800	1,095	1,900	\$36,238
Data Entry Keyers, Ex Composing	350	501	43.14%	30	151	180	\$18,843
Adjustment Clerks	676	959	41.86%	40	283	320	\$23,691
Counselors, Vocational Education	297	417	40.40%	70	120	190	\$39,370

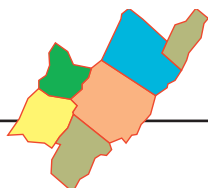
*These figures reflect the Median Annual Wage for Virginia. Wage data for these occupations in WIA IV were not available.

Declining Occupations

	Employment			Openings		
	Estimated 1998	Projected 2008	% Change	Replacements	Growth	Total
Sewing Machine Oprs, Garment	1,548	986	-36.60%	210	-562	210
Child Care Workers, Private	157	105	-33.12%	70	-52	70
Pressing Machine Oprs/Tndrs, Textiles	179	137	-23.46%	30	-42	30
Machine Tool Cutting Oprs, M/P	1,232	964	-21.75%	210	-268	210
Supervisors, Farm Workers	131	106	-19.08%	30	-25	30
Farm Equipment Operators	219	184	-15.98%	20	-35	20
Cleaners & Servants, Private	2,899	2,579	-11.04%	890	-320	890
Production Inspectors, Graders	338	301	-10.95%	70	-37	70
Machine Forming Operators, M/P	1,145	1,031	-9.96%	260	-114	260
Bank Tellers	374	340	-9.09%	90	-34	90
Farm Managers	751	706	-5.99%	320	-45	320
	1,157	1,131	-2.25%	190	-26	190

Source: Industry and Occupational Employment Projections, 1998 - 2008.

Projections are for the Northwest Virginia Non-Metropolitan Region (Region 4). Wages are for WIA IV.

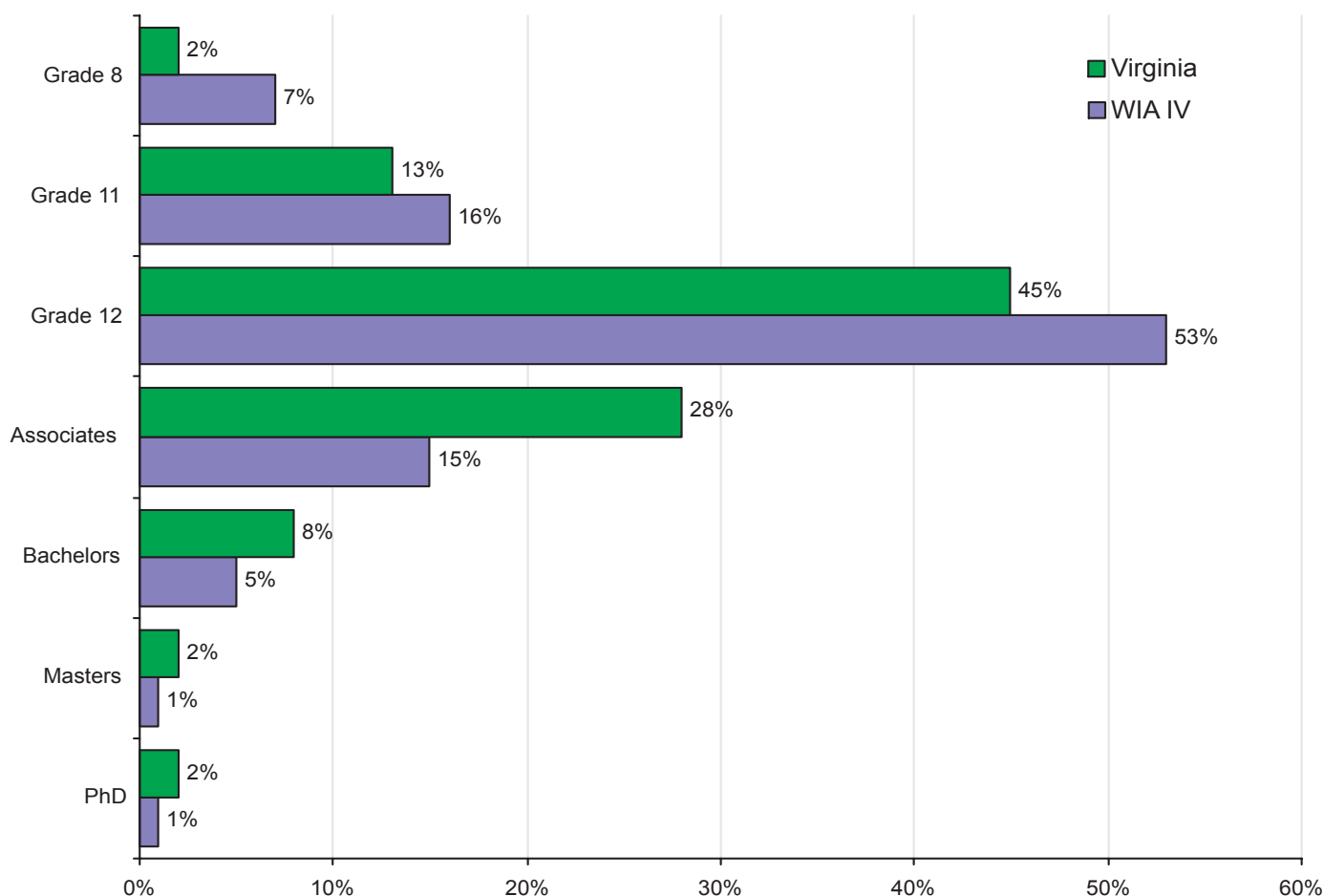


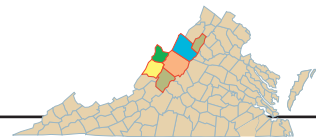
Characteristics of the Unemployed

Marketing the local labor force to new or expanding companies requires information about potential employees that would be available for immediate hire. Monthly data, collected as unemployed individuals apply for unemployment insurance benefits, provide information on various characteristics of the unemployed claimants. Demographic characteristics are recorded for age, race, sex, and education level. In addition, the industry of last employment and the occupation held in the most recent job is also part of the information collected when applicants register for unemployment insurance benefits.

As seen in the chart below, 53% of the unemployed claimants in Shenandoah Valley have a grade 12 education level, as compared to only 41% of claimants statewide. On the other hand, at the level of Associates degree and higher, Shenandoah Valley has a smaller percentage of claimants relative to the state. While Shenandoah Valley has 1,614 unemployed claimants with at least an Associates degree, some of the other regions of the state have a higher ratio of claimants with post-secondary education.

Unemployed Claimants by Education Level





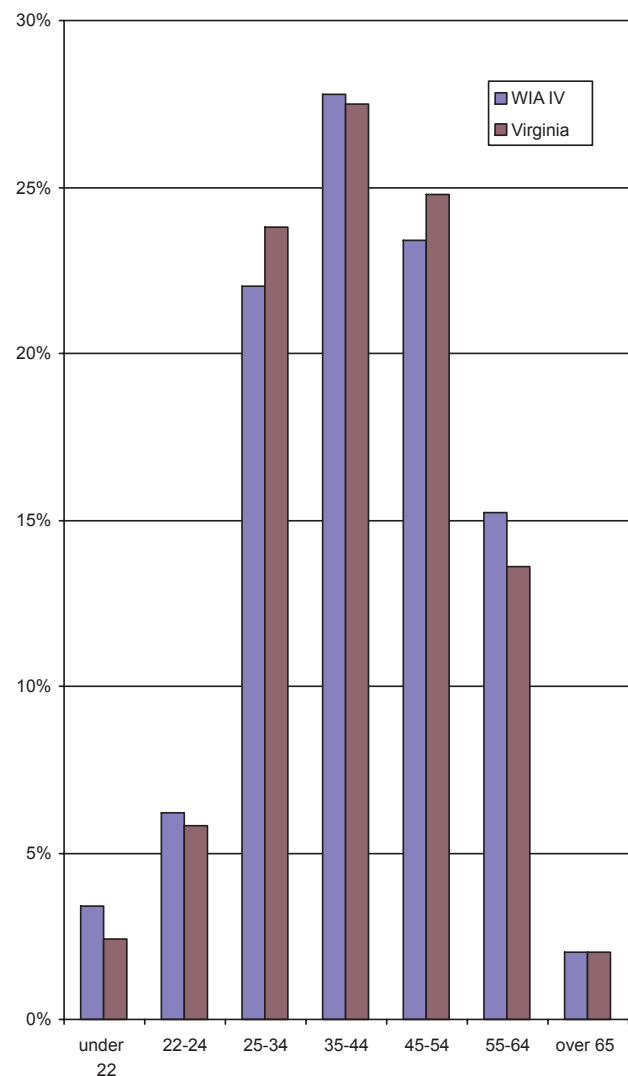
Characteristics of the Unemployed

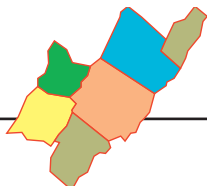
Production workers comprise the largest category of unemployed beneficiaries in Shenandoah Valley, accounting for almost 21% of total claimants in February 2004. Construction and Extraction and Transportation and Material Moving workers also account for a significant share of the unemployed claimants, collectively representing over 30% of the total. Employers requiring workers in these occupation categories will find an abundant supply.

Claimants by Occupation

OCCUPATION	Number of Claimants
Management	443
Business and Financial Operations	72
Computer and Mathematical	50
Architecture and Engineering	110
Life, Physical, and Social Science	43
Community and Social Services	11
Legal	4
Education, Training, and Library	36
Arts, Design, Entertainment, Sports, and Media	51
Healthcare Practitioners and Technical	61
Healthcare Support	113
Protective Service	76
Food Preparation and Serving Related	353
Building and Grounds Cleaning and Maintenance	634
Personal Care and Service	122
Sales and Related	415
Office and Administrative Support	631
Farming, Fishing, and Forestry	62
Construction and Extraction	1,371
Installation, Maintenance, and Repair	281
Production	1,502
Transportation and Material Moving	860
Military Specific	1
SOC INA	
TOTAL	7,302

Claimants by Age

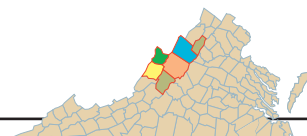




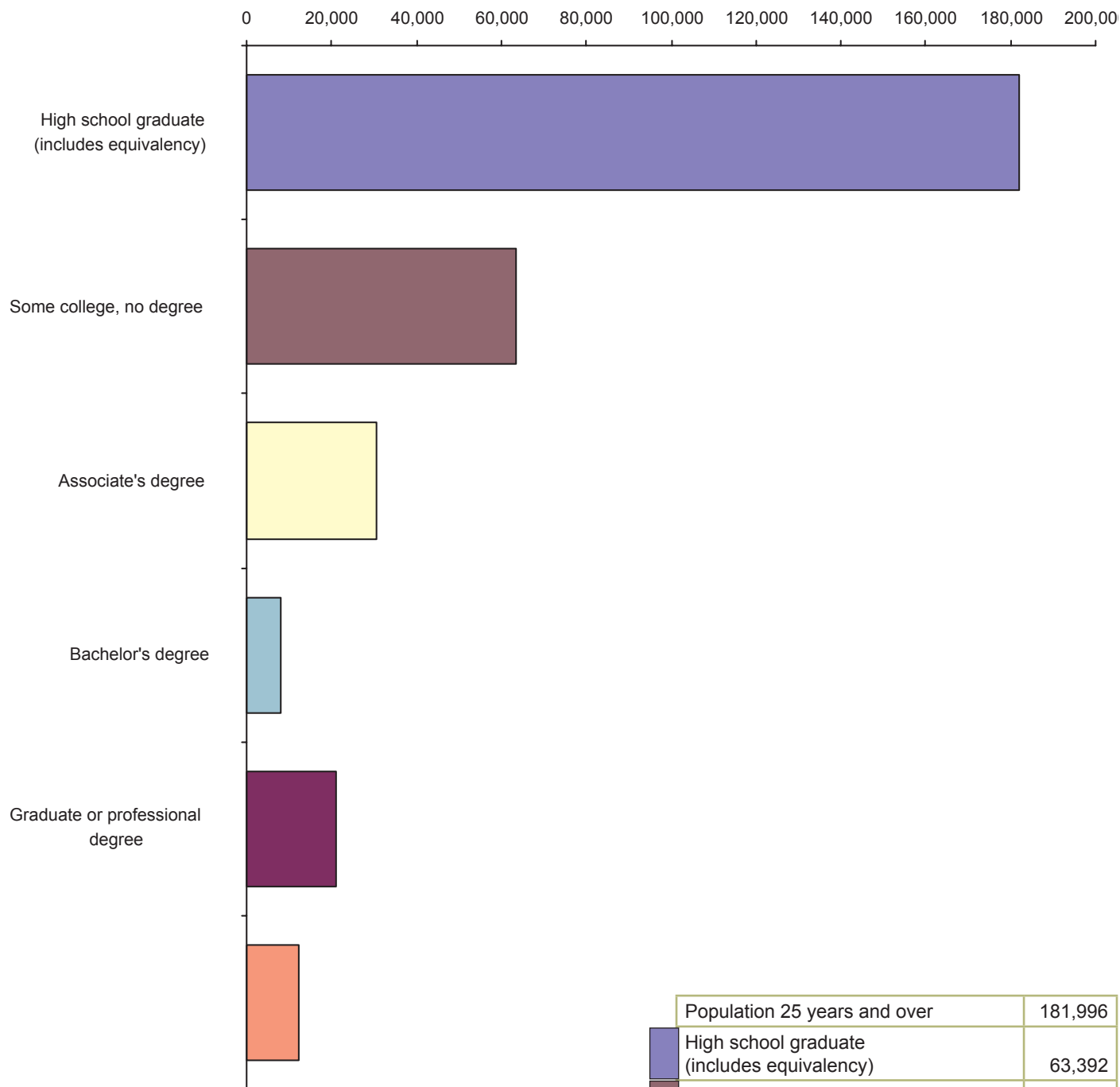
IV. Education Profile

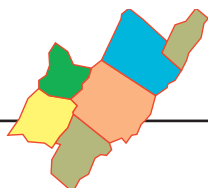
Education data describe the human capital embodied in the current labor force and provide insight into the education and training that will be required to fill the ranks of the future labor force. Some key features of the WIA II's education and training environment are as follows:

- Educational attainment at the baccalaureate level and above is low relative to the state as a whole.
- An assessment of the occupation-driven demand for local training needs indicates that between 1998 and 2008 the greatest demand for graduates from:
 - *Post-secondary vocational programs* will be in Auto Mechanic/Technician and Licensed Practical Nursing.
 - *Associate's degree programs* will be in Registered Nursing.
 - *Baccalaureate degree programs* will be in Accounting; Computer and Information Sciences; and Elementary, General, and Physical Education.
- An assessment of the occupation-driven demand for worker skills indicates that between 1998 and 2008 there will a small increase in the skill levels required in *locating information, reading for information, and writing*.



Education Level





Occupation-Driven Training Projection

In this section we use Virginia Employment Commission's (VEC's) occupational employment projections for Region 4 – Northwest Virginia,¹ in combination with a crosswalk developed by the National Crosswalk Service Center (NCSC) to “map” occupations into their prerequisite education and training programs.² Often these are many-to-many relationships where one occupation maps into several alternative education and training programs, and one program serves as a conduit into multiple occupations. The analysis is then further refined by using a classification scheme developed by the Bureau of Labor Statistics (BLS) to “sort” occupations according to the minimum degree or award typically required for employment in that occupation.³ Through this combination of steps, we are able to use VEC's occupational employment projections to predict the occupation-driven demand for specific education and training programs within the Northwest Virginia Region.⁴ The method used to accomplish this task is not new and has been

successfully employed in earlier studies conducted in several states, including Virginia.⁵

The table that follows depicts the annual occupation-driven demand for training needs in Region 4 – Northwest Virginia for the 1998 to 2008 period, as derived from this analysis. As these data show, the largest numbers of needed graduates are in auto repair (*e.g.*, Auto/Automotive Mechanic / Technician), business (*e.g.*, Accounting, Business Administration and Management, General Finance), computer technology (Computer and Information Sciences, Information Sciences and Systems, Management Information Systems and Data Processing), education (*e.g.*, Elementary Teacher Education, General Education, and Physical Education Coaching and Teaching), and health (*e.g.*, Medicine (MD), Registered Nurse, and Licensed Practical Nurse).

1 Region 4 – Northwest Virginia is comprised of Alleghany, Augusta, Bath, Frederick, Highland, Luisa, Madison, Nelson, Orange, Page, Rappahannock, Rockbridge, Rockingham, and Shenandoah counties, and the cities of Buena Vista, Clifton Forge, Covington, Harrisonburg, Lexington, Staunton, Waynesboro, and Winchester.

2 The National Crosswalk Service Center (NCSC) is funded by the U.S. Department of Labor, Employment and Training Administration. This crosswalk identifies the prerequisite instructional programs necessary for employment in 651 specific occupations.

3 The Bureau of Labor Statistics classifies occupations according to eleven education and training categories. Four of these involve on-the-job training or work experience only and the remaining seven require some level of postsecondary education (*i.e.*, first-professional degree, doctoral degree, master's degree, bachelor's degree, associate's degree, or postsecondary vocational training). For purposes of this study, we restrict the analysis to occupations that fall within these seven education and training categories.

4 More formally, the demand for education and training programs is calculated as:

$$DCIP_i = \sum Dcip_{ij}$$

Where,

$$Dcip_{ij} = (SOC_j)(GCIP_i / \sum GCIP_{ij})$$

and,

$DCIP_i$ = the annual demand for instructional program i

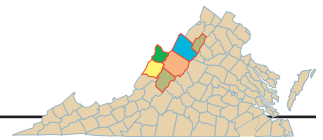
$\sum Dcip_{ij}$ = the annual demand for instructional program(s) i across all occupation(s) j

SOC_j = the projected annual openings for occupation j

$GCIP_i$ = Virginia graduates from instructional program i (for academic year 2000-01)

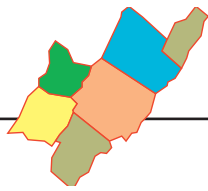
$\sum GCIP_{ij}$ = Virginia graduates from all instructional program(s) i (for academic year 2000-01) related to occupation j

5 Similar methods are used in at least seven states (California, Georgia, Idaho, Illinois, New Jersey, Utah, and Virginia) to project anticipated education and training demands. For an excellent exposition of this method see, William J. Drummond and Jan L. Youtie, “Occupational Employment, Demand for College Graduates, and Migration: A Statewide View,” a report to the Board of Regents, University System of Georgia, 1999. For an example of how this method has been used previously in Virginia see, A. Fletcher Mangum, “System-Wide Needs Assessment for Virginia Education,” State Council of Higher Education for Virginia, March 28, 2002, p.90.



Annual Occupation-Driven Training Needs in the Northwest Virginia Region, 1998 – 2008

Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Accounting					34			34
Administrative Assistant/ Secretarial Science, General							10	10
Agricultural Animal Husbandry and Production Management				1	1			2
Agricultural Business and Management, General				3				3
Agricultural Business / Agribusiness Operations				3				3
Agricultural Production Workers and Managers, General				1				1
Agricultural Teacher Education (Vocational)					2			2
Animal Sciences, General				7				7
Architecture					2			2
Art Teacher Education					8			8
Art, General				2				2
Audiology/Hearing Sciences			1					1
Auto / Automotive Mechanic / Technician							53	53
Automotive Engineering Tech / Technician							3	3
Barber/Hairstylist							1	1
Bilingual/Bicultural Education					3			3
Biology Teacher Education					1			1
Biology, General		3						3



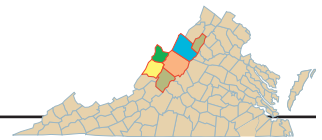
WIA IV

Education Profile

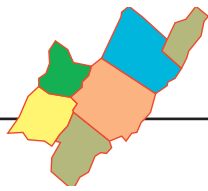
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Business Administration and Management, General				229	11			240
Business Computer Programming / Programmer					3			3
Business Marketing and Marketing Management				2				2
Business Systems Analysis and Design					1			1
Business Systems Networking and Telecommunications					1	11		12
Business Teacher Education (Vocational)					2			2
Cardiovascular Tech / Technician						3		3
Chemical Engineering					4			4
Chemistry, General					4			4
Child Care and Guidance Workers and Managers, General					20			20
Child Care Provider / Assistant					9			9
Child Care Services Manager					3			3
City/Urban, Community and Regional Planning			4					4
Civil Engineering, General					6			6
College/Postsecondary Student Counseling and Personnel			1					1
Communication Disorders, General			3					3
Computer and Information Sciences, General					33			33

Education Profile

WIA IV



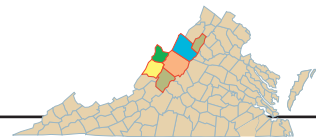
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Computer and Information Sciences, Other					1			1
Computer Engineering					7			7
Computer Engineering Tech / Technician						2		2
Computer Installer and Repairer							1	1
Computer Maintenance Tech/Technician							2	2
Computer Programming					8			8
Computer System Analysis					2			2
Computer Teacher Education					3			3
Cosmetic Services, General							1	1
Cosmetologist							18	18
Counselor Education Counseling and Guidance Services			16					16
Court Reporter							1	1
Dental Clinical Sciences/ Graduate Dentistry (MS, PhD)	1							1
Dental Hygienist						14		14
Dentistry (DDS, DMD)	5							5
Design and Applied Arts, Other					2			2
Design and Visual Communications					4			4
Dietetics / Human Nutritional Services					1			1
Economics, General					2			2
Education Administration and Supervision, General				12				12



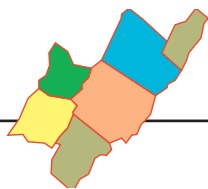
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Education Administration and Supervision, Other				1				1
Education of the Specific Learning Disabled					1			1
Education of the Speech Impaired					1			1
Education, General				23	136			159
Educational Supervision				1				1
Electrical and Electronic Engineering – Related Tech / Technician						2		2
Electrical and Electronics Equipment Installer and Repairer							1	1
Electrical, Electronic and Communications Engineering Tech / Technician						3		3
Electrical, Electronics and Communication Engineering					15			15
Elementary Teacher Education					83			83
Elementary, Middle and Secondary Education Administration				2				2
Emergency Medical Tech / Technician							4	4
Engineering / Industrial Management				19	1			20
English Teacher Education					11			11
Enterprise Management and Operation, General				2				2
Farm and Ranch Management				3				3
Fashion Design and Illustration					2			2

Education Profile

WIA IV



Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Film/Video and Photographic Arts, Other							1	1
Finance, General				23	10			33
Financial Planning					1			1
Fine/Studio Arts				1				1
Floristry Marketing Operations					1			1
Foods and Nutrition Studies, General					1			1
Foreign Languages Teacher Education					2			2
Funeral Services and Mortuary Science						2		2
General Buying Operations					2			2
General Retailing Operations					4			4
Geology					1			1
Graphic Design, Commercial Art and Illustration				3				3
Health and Physical Education, General					2			2
Health Teacher Education					5			5
Higher Education Administration				1				1
History Teacher Education					1			1
Home Economics Teacher Education (Vocational)					1			1
Human Resources Management				6	20			26
Human Resources Management, Other					2			2
Industrial Design					1			1



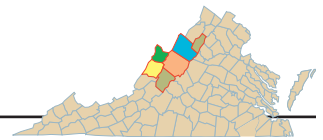
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Education Profile

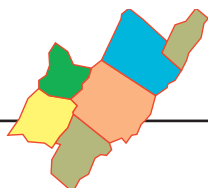
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Industrial/Manufacturing Engineering					3			3
Information Sciences and Systems					21	13		34
Insurance and Risk Management					1			1
Insurance Marketing Operations					8			8
Interior Architecture					1			1
Interior Design					2			2
International Business				7				7
Investments and Securities				1	4			5
Junior High / Intermediate / Middle School Teacher Education					5			5
Juridical Science / Legal Specialization (LLM, MCL, JSD)	1							1
Labor/Personnel Relations and Studies				1	2			3
Law (LLB, JD)	11							11
Law and Legal Studies, Other	1							1
Library Science, Other			1					1
Library Science / Librarianship			12					12
Make-Up Artist							1	1
Management Information Systems and Business Data Processing					15	21		36
Management Science			1					1
Mathematics Teacher Education					8			8
Mechanical Engineering					11			11

Education Profile

WIA IV



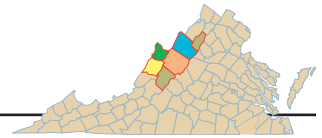
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Medical Administrative Assistant / Secretary							2	2
Medical Office Management							1	1
Medical Pharmacology and Pharmaceutical Sciences	1							1
Medical Records Tech / Technician						6		6
Medical Transcription							5	5
Medicine (MD)	32							32
Music Teacher Education					14			14
Nursing (R.N. Training)						98		98
Nursing Anesthetics (Post-R.N.)						1		1
Nursing Science (Post-R.N.)						5		5
Nursing, Family Practice (Post-R.N.)						1		1
Nursing, Other						14		14
Occupational Therapy					6			6
Occupational Therapy Assistant						3		3
Optometry (O.D.)	1							1
Organizational Behavior Studies					4			4
Osteopathic Medicine (D.O.)	5							5
Paralegal/Legal Assistant						8		8
Parks, Recreation and Leisure Facilities Management					1			1
Parks, Recreation and Leisure Studies					1			1



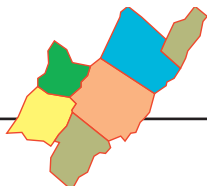
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Pharmacy (B. Pharm., Pharm D.)	11							11
Pharmacy, other	1							1
Photography							1	1
Physical Education Teaching and Coaching					31			31
Physical Therapy			8					8
Physical Therapy Assistant						8		8
Physician Assistant					6			6
Practical Nurse (LPN Training)							58	58
Psychiatric / Mental Health Services Technician							2	2
Psychology, General			4					4
Public Administration				17				17
Public Administration and Services, Other				1				1
Public Relations and Organizational Communications					6			6
Purchasing, Procurement and Contracts Management					16			16
Reading Teacher Education					18			18
Real Estate					8		5	13
Recreational Therapy					1			1
Respiratory Therapy Technician						7		7
School Psychology			2					2
Science Teacher Education, General					4			4
Secondary Teacher Education					20			20

Education Profile

WIA IV



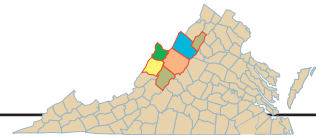
Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Social Science Teacher Education					2			2
Social Studies Teacher Education					5			5
Spanish Language Teacher Education					1			1
Special Education, General					14			14
Special Education, Other					1			1
Speech-Language Pathology			2					2
Speech-Language Pathology and Audiology			6					6
Sport and Fitness Administration/ Management					1			1
Surgical / Operating Room Technician							5	5
Surveying					1			1
Taxation					2			2
Teacher Education, Specific Academic and Vocational Programs					9			9
Technical Teacher Education (Vocational)					2			2
Technology Teacher Education / Industrial Arts Teacher Ed					3			3
Trade and Industrial Teacher Education (Vocational)					3			3
Travel Services Marketing Operations							4	4
Veterinarian Assistant / Animal Health Technician						3		3
Veterinary Clinical Services (MS, PhD)	1							1



WIA IV

Education Profile

Program	First Professional	Doctoral Degree	Master's Degree	Work Experience plus degree	Bachelor's Degree	Associate's Degree	Postsecondary Vocational Training	Total
Veterinary Medicine (DVM)	4							4
Vocational Rehabilitation Counseling			1					1
Totals	75	3	62	373	743	225	186	1667



Work Skills Projection

In this section we use the VEC's occupational employment projections for Region 4 – Northwest Virginia, in combination with occupational skills profiles developed by ACT,¹ to identify the skill sets that will be required to fill projected annual job openings within the region. The skills categories addressed in this analysis are Applied Mathematics, Applied Technology, Listening, Locating Information, Observation, Reading for Information, Teamwork, and Writing. A description of each category, the skills levels associated with it, and the proportion of projected annual job openings that fall within each skill level follow.

Applied Mathematics

The *Applied Mathematics* assessment measures a person's skill in using mathematical reasoning to solve work-related problems. ACT defines the skills levels associated with this category as follows.

Level 3:

- Perform basic mathematical operations using whole numbers and decimals.
- Convert a number from one form into another using whole numbers, fractions, decimals, or percentages.
- Solve problems that are straightforward, involving a single type of mathematical operation.
- Translate easily from a verbal setup to a mathematical equation when all the information needed to solve the problem is provided in logical order and no unrelated information is included.

Level 4 (in addition to requirements for previous levels):

- Perform one or two mathematical operations using several positive or negative numbers.
- Add commonly known fractions, decimals, or percentages, or add three fractions that share a common denominator.
- Calculate averages, simple ratios, proportions, and rates, using whole numbers and decimals.

- Reorder verbal information before performing calculations.
- Determine which operations to perform and in what order.
- Read a simple chart or graph to obtain the information needed to solve a problem.

Level 5 (in addition to requirements for previous levels):

- Look up and calculate single-step conversions within English or non-English systems of measurement or between systems of measurement.
- Calculate using mixed units and several steps of logic.
- Calculate perimeters and areas of basic shapes.
- Calculate percentage discounts and markups.
- Determine what information, calculations, and unit conversions are needed to find a solution.

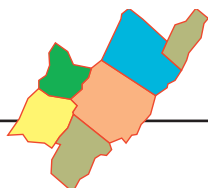
Level 6 (in addition to requirements for previous levels):

- Calculate using negative numbers, fractions, ratios, percentages, and mixed numbers.
- Calculate multiple rates for comparison or use in other calculations.
- Find basic areas and volumes of rectangular solids.
- Identify and correct errors in calculations.
- Solve problems involving considerable setup and multiple-step calculations or conversions.

Level 7 (in addition to requirements for previous levels):

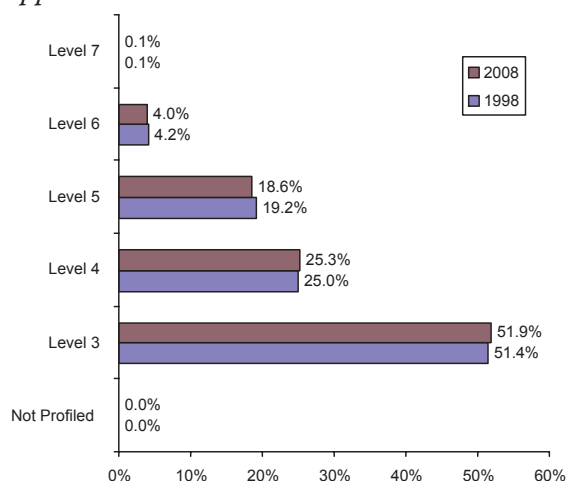
- Calculate using multiple steps of logic.
- Calculate multiple areas and the volumes of spheres, cylinders, and cones.
- Solve problems with more than one unknown.

¹ The occupational skills profiles used in this analysis were provided by ACT. ACT is an independent, non-profit organization that specializes in research and assessment related to education and work. These profiles are based on actual ACT *WorkKeys* assessments of thousands of employed individuals nationally. They represent the most comprehensive and current measure of the work skills required for specific occupations.

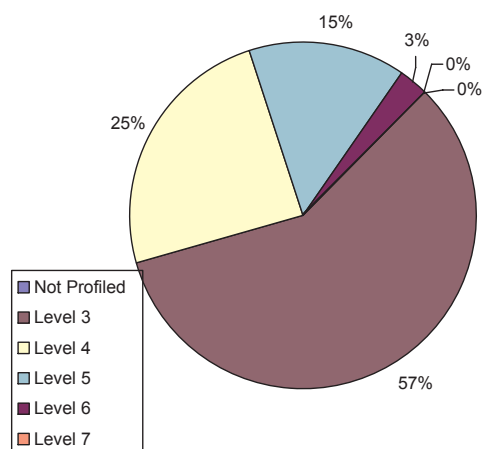


- Solve problems involving nonlinear functions, such as rates of change.
- Calculate by applying basic statistical concepts.
- Derive information needed to solve problems if incomplete or implicit information is presented.

The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Applied Mathematics* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 *Applied Mathematics* skills.



Proportion of Jobs in Northwest Virginia by Required Skill Level – *Applied Mathematics*



Annual Openings in Northwest Virginia by Required Skill Level – *Applied Mathematics*

Applied Technology

The *Applied Technology* assessment measures a person's skill in using the basic principles of mechanics, electricity, fluid dynamics, and thermodynamics to solve problems with machines, equipment, and structures found in the workplace. ACT defines the skills levels associated with this category as follows.

Level 3:

- Understand the operation of basic hand tools, simple machine components, and uncomplicated systems, such as piping systems, simple electrical heaters, or other equipment found in the home, school, or workplace.
- Apply elementary principles underlying the operation of physical systems, such as the workings of plumbing components or simple electrical systems.

Level 4 (in addition to requirements for previous levels):

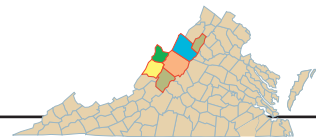
- Understand the operation of moderately complex tools, machines, and systems, such as appliances, pulley-driven equipment, or piping systems that carry more than one fluid.
- Apply elementary principles underlying the operation of physical systems, such as a block and tackle or cooling fins.

Level 5 (in addition to requirements for previous levels):

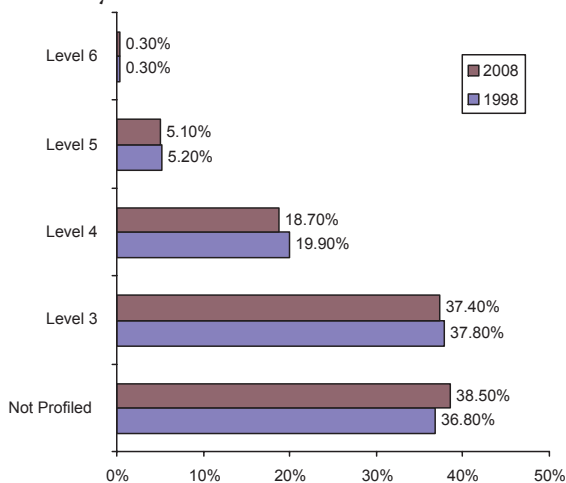
- Use the basic principles of mechanics, electricity, thermodynamics, and fluid dynamics in moderate and advanced applications.
- Understand complex machines and systems, such as the operation of gasoline engines, complex appliances, or an electrical system in a building.

Level 6 (in addition to requirements for previous levels):

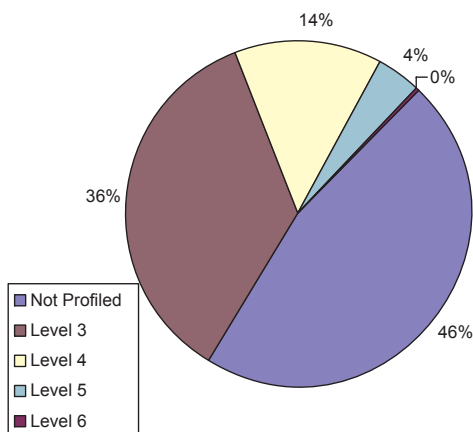
- Use principles of mechanics, electricity, thermodynamics, and fluid dynamics interacting in advanced applications such as air conditioning units.
- Troubleshoot complex systems in which a variety of mechanical, electrical, thermal, or flow faults are potential sources of difficult problems.



The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Applied Technology* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 *Applied Technology* skills. The large “Not Profiled” proportion indicates that ACT has not profiled many of these occupations with respect to *Applied Technology* skills. As a result, it is not possible to include them in the analysis.



Proportion of Jobs in Northwest Virginia by Required Skill Level – Applied Technology



Annual Openings in Northwest Virginia by Required Skill Level – Applied Technology

Listening

The *Listening* portion of the *Listening and Writing* assessment measures a person’s skill in listening to and

conveying information. ACT defines the skills levels associated with this category as follows.

Level 1:

- Write down a small amount of useful information based on a spoken communication.
- Give clues to the gist of the situation or provide sources of further information, but do not include enough information to give the receiver a correct understanding of the situation described in the message.

Level 2 (in addition to requirements for previous levels):

- Correctly write down the basic ideas of a spoken message.
- Give a fair amount of useful information, but may miss some of the important details or incorrectly record some of the information.

Level 3 (in addition to requirements for previous levels):

- Listen to a spoken communication and record messages that are basically correct.
- Present all the primary details and the relationships among them correctly, but may miss one or two pieces of important information.

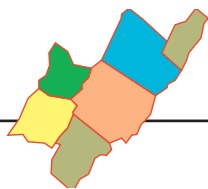
Level 4 (in addition to requirements for previous levels):

- Accurately convey the central idea of a spoken communication.
- Correctly record all the important information and the relationships among pieces of information, but may miss or incorrectly record some details or include irrelevant information.

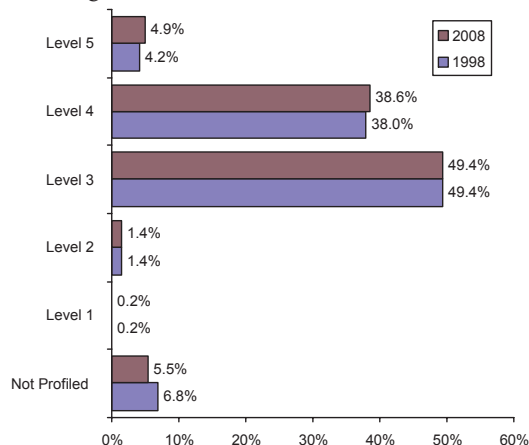
Level 5 (in addition to requirements for previous levels):

- Correctly record all the important information and the relationships among pieces of information from a spoken communication.
- Use supporting details to convey insight into the particular situation the message involves.

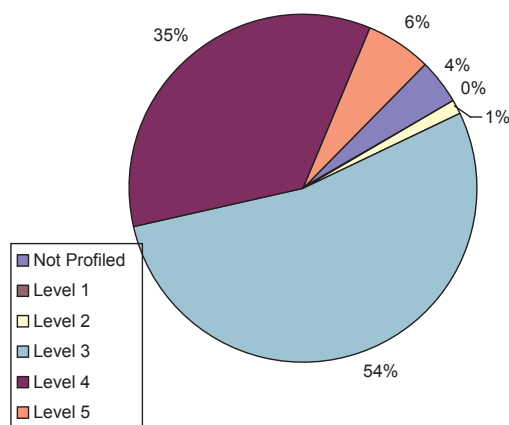
The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by



required *Listening* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 and Level 4 *Listening* skills.



Proportion of Jobs in Northwest Virginia by Required Skill Level – Listening



Annual Openings in Northwest Virginia by Required Skill Level – Listening

Locating Information

The *Locating Information* assessment measures a person's skill in using workplace graphics such as diagrams, floor plans, tables, charts, graphs, forms, and instrument gauges. ACT defines the skills levels associated with this category as follows.

Level 3:

- Find one or two pieces of information in a graphic.

- Fill in one or two pieces of information that are missing from a graphic.

Level 4 (in addition to requirements for previous levels):

- Find several pieces of information in graphics.
- Summarize and/or compare information and trends in a single graphic.
- Summarize and/or compare information and trends among more than one graphic by determining the relationships among the graphics.

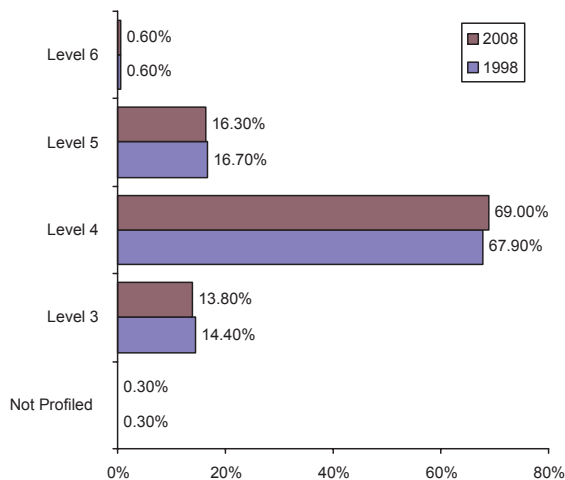
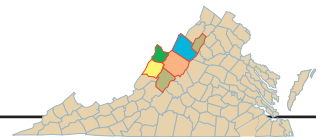
Level 5 (in addition to requirements for previous levels):

- Summarize and/or compare information and trends in a single graphic.
- Sort through distracting information to summarize and/or compare information and trends presented in more than one workplace graphic.

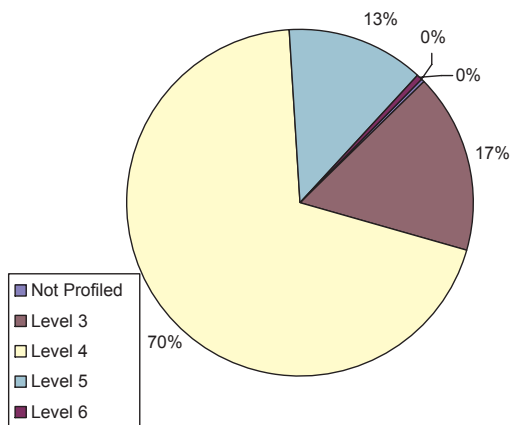
Level 6 (in addition to requirements for previous levels):

- Draw conclusions from the information presented in very detailed graphics.
- Apply information from these types of graphics to specific situations.
- Analyze data within these types of graphics to make decisions and/or predictions requiring judgments based on the information presented.

The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Locating Information* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the vast majority of jobs will require workers with Level 4 *Locating Information* skills.



Proportion of Jobs in Northwest Virginia by Required Skill Level – Locating Information



Annual Openings in Northwest Virginia by Required Skill Level – Locating Information

Observation

The *Observation* assessment measures a person's skill at noticing details and paying attention to instructions and demonstrations. The following is a description of the skills levels associated with this area.

Level 3:

- Pay attention.
- Watch and listen to a strongly cued demonstration or set of instructions.
- Recall a few strongly reinforced details of a process or procedure.

Level 4:

- Sustain focused attention on the demonstrated instructions, process, or procedures.
- Select and attend to important details.
- Recall a few important, moderately reinforced details about the demonstrated process or procedure.

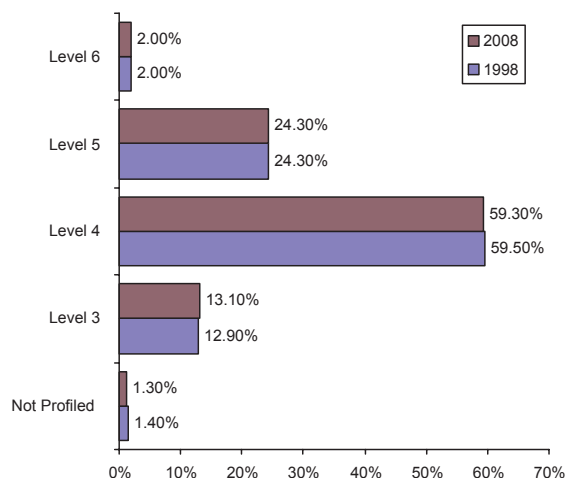
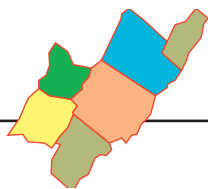
Level 5:

- Focus attention on and recall several important aspects of the information presented.
- Ignore irrelevant background information through selective attention to important details.
- Maintain attention to detail.
- Recall several important details about unfamiliar material.

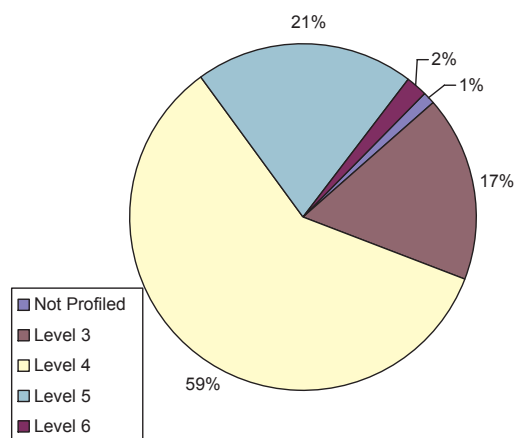
Level 6:

- Notice and remember several details that are relevant to the process or procedure being shown.
- Take in and recall incoming sensory information so it can be used to make predictions, comparisons, or evaluations.
- Visualize how a detail or task fits into the entire process or procedure demonstrated.
- Interpret if-then and cause-effect relationships.

The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Observation* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 *Observation* skills.



Proportion of Jobs in Northwest Virginia by Required Skill Level – Observation



Annual Openings in Northwest Virginia by Required Skill Level – Observation

Reading for Information

The *Reading for Information* assessment measures a person's skill in reading and using work-related information including instructions, policies, memos, bulletins, notices, letters, manuals, and governmental regulations. ACT defines the skills levels associated with this category as follows.

Level 3:

- Identify uncomplicated key concepts and simple details.
- Recognize the proper placement of a step in a sequence of events, or the proper time to perform a task.

- Identify the meaning of a word that is defined within the document.
- Identify the meaning of a simple word that is not defined within the document.
- Recognize the application of instructions given in the document to situations that are also described in the document.

Level 4:

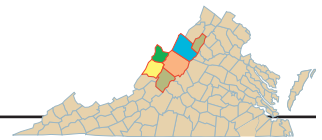
- Identify important details that are less obvious than those in Level 3.
- Recognize the application of more complex instructions, some of which involve several steps, to described situations.
- Recognize cause-effect relationships.
- Determine the meaning of words that are not defined in the document.

Level 5:

- Identify the paraphrased definition of a technical term or jargon that is defined in the document.
- Recognize the application of technical terms or jargon to stated situations.
- Recognize the definition of an acronym that is defined in the document.
- Identify the appropriate definition of a word with multiple meanings.
- Recognize the application of instructions from the document to new situations that are similar to those described in the document.
- Recognize the application of more complex instructions to described situations, including conditionals and procedures with multiple steps.

Level 6:

- Recognize the application of jargon or technical terms to new situations.
- Recognize the application of complex instructions to new situations.
- Recognize, from context, the less common meaning of a word with multiple meanings.
- Generalize from the document situations not described in the document.

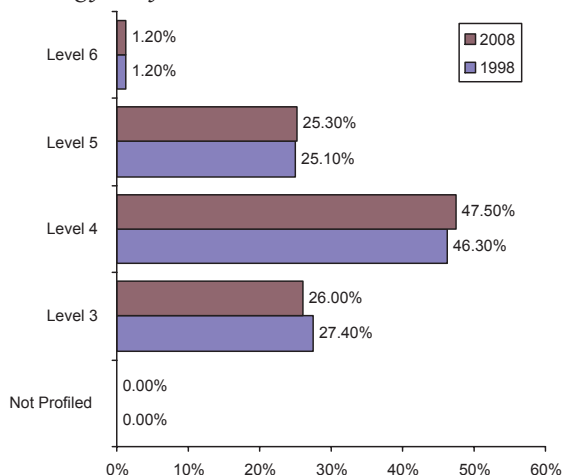


- Identify implied details.
- Explain the rationale behind a procedure, policy, or communication.
- Generalize from the document to a somewhat similar situation.

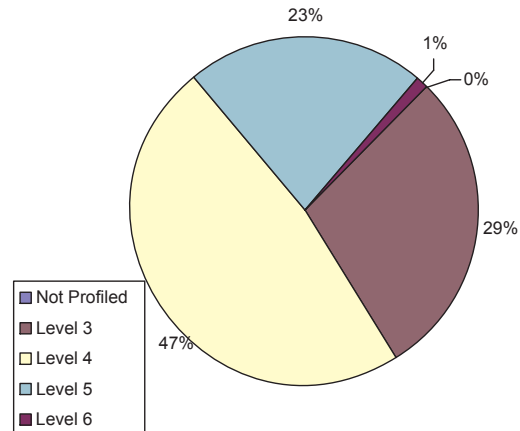
Level 7:

- Recognize the definitions of difficult, uncommon jargon or technical terms, based on the context of the reading materials.
- Figure out the general principles underlying described situations and apply them to situations neither described in nor completely similar to those in the document.

The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Reading for Information* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 *Reading for Information* skills.



Proportion of Jobs in Northwest Virginia by Required Skill Level – Reading for Information



Annual Openings in Northwest Virginia by Required Skill Level – Reading for Information

Teamwork

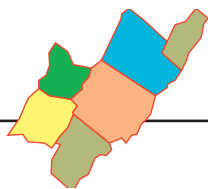
The *Teamwork* assessment measures a person's skill in choosing behaviors and/or actions that simultaneously support relationships within a team and lead toward the accomplishment of work tasks. The following is a description of the skills levels associated with this area.

Level 3:

- Identify team goals and ways to work with other team members to accomplish team goals.
- Recognize that a team is having problems finishing a task and identify the cause of those problems.
- Choose actions that actively support the ideas other team members have for accomplishing team goals.
- Recognize the need for trust and dependability in a team environment.

Level 4:

- Identify the organization of tasks and the time schedule that would help the team reach goals efficiently, creatively, and effectively.
- Select approaches that accept direction from other team members in order to complete tasks and to build and keep up good team relations.
- Identify behaviors that show appreciation for the personal and professional qualities of other team members and respect for their diversity.
- Recognize the need for commitment to quality and sensitivity to customers while pursuing the team goal.



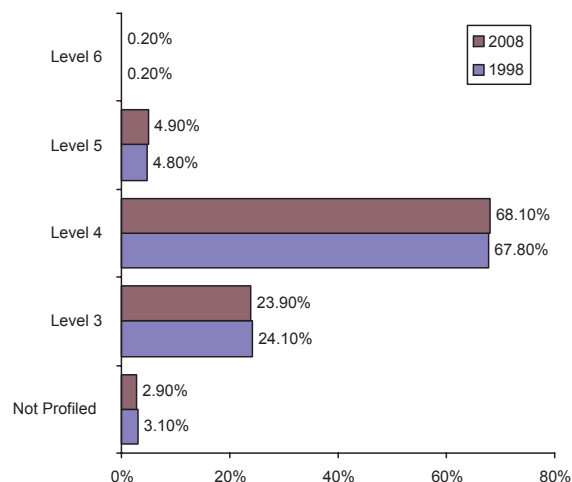
Level 5:

- Identify courses of action that give direction to other team members.
- Determine the best use of team talents to accomplish goals.
- Choose approaches that encourage other team members to improve relationships and/or complete tasks.
- Consider and evaluate the possible effects of alternative behaviors on both team relationships and the completion of tasks.

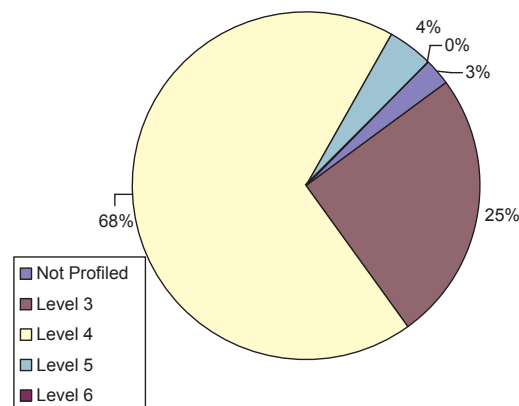
Level 6:

- Identify the focus of team activity and select a new focus if that would help the team meet its goals more effectively.
- Select approaches that show a willingness to give and take direction, as needed, to further team goals (e.g., recognize the organization of team members' tasks that would best serve the larger goals of the team).
- Choose approaches that encourage a team to act as a unit and reach agreement when discussing specific issues.
- Identify actions that would help manage differences of opinion between team members, moving the team toward its goals while valuing and supporting individual diversity.

The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Teamwork* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 4 *Teamwork* skills.



Proportion of Jobs in Northwest Virginia by Required Skill Level – Teamwork



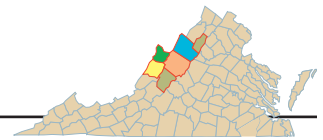
Annual Openings in Northwest Virginia by Required Skill Level – Teamwork

Writing

The *Writing* portion of the *Listening and Writing* assessment measures a person's skill in writing work-related messages. ACT defines the skills levels associated with this category as follows.

Level 1:

- Write messages in English that contain a large number of major grammatical, punctuation, spelling, and/or other mechanical errors making the messages very unclear and inconsistent with standard business English.



Level 2:

- Write messages that are generally understandable, but contain many errors in grammar, punctuation, and/or sentence structure making these messages somewhat difficult to comprehend.

Level 3:

- Write messages that are clear, but may include some incomplete sentences and/or errors in grammar and punctuation.

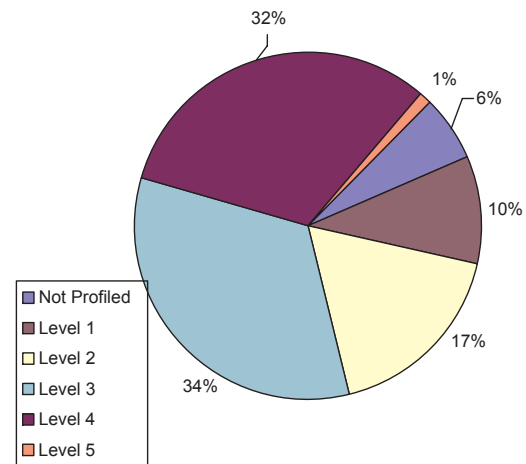
Level 4:

- Write messages that are clear and generally consistent with standard business English, but may contain a few minor errors in grammar and punctuation, and/or the writing style may lack clear organization and appropriate transitions.

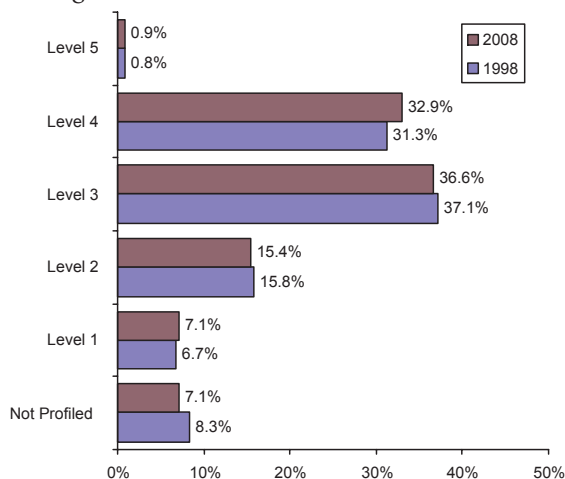
Level 5:

- Write messages that are clear and highly consistent with standard business English.
- Use good sentence structure with a smooth, logical style and no mechanical errors.

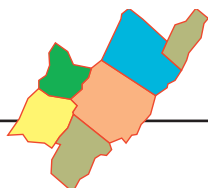
The following figure details the percentage of overall jobs in Region 4 – Northwest Virginia in 1998 and 2008 by required *Writing* skills level, as determined by the ACT occupation skills profiles. The second figure provides a similar breakdown for projected annual job openings between 1998 and 2008. These data show that the majority of jobs will require workers with Level 3 and Level 4 *Writing* skills.



Annual Openings in Northwest Virginia by Required Skill Level – Writing



Proportion of Jobs in Northwest Virginia by Required Skill Level – Writing



Graduate Data

As a compliment to the prior two sections which detailed the likely demand for skilled workers in the region, this section provides data on the current supply

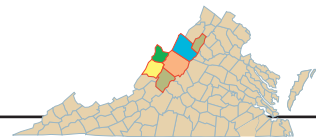
of graduates within WIA IV. These data reflect number of graduates, by institution, and by academic program for the 2002-2003 academic year.¹

Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
James Madison Univ	Communications, General (09.0101)	0	0	0	260	0	0	0
James Madison Univ	Information Sciences and Systems (11.0401)	0	0	0	158	0	0	0
James Madison Univ	Computer and Information Sciences, General (11.0101)	0	0	0	93	0	33	0
James Madison Univ	Education, General (13.0101)	0	0	0	0	0	25	0
James Madison Univ	Special Education, General (13.1001)	0	0	0	0	0	20	0
James Madison Univ	Education, Other (13.9999)	0	0	0	0	0	0	0
James Madison Univ	Health Teacher Education (13.1307)	0	0	0	0	0	11	0
James Madison Univ	Business Teacher Education (Vocational) (13.1303)	0	0	0	4	0	0	0
James Madison Univ	Counselor Education Counseling and Guidance Services (13.1101)	0	0	0	0	0	25	0
James Madison Univ	Adult and Continuing Teacher Education (13.1201)	0	0	0	0	0	9	0
James Madison Univ	Foreign Languages and Literatures, General (16.0101)	0	0	0	15	0	0	0
James Madison Univ	Foods and Nutrition Studies, General (19.0501)	0	0	0	19	0	0	0
James Madison Univ	English Technical and Business Writing (23.1101)	0	0	0	30	0	8	0
James Madison Univ	English Language and Literature, General (23.0101)	0	0	0	132	0	7	0
James Madison Univ	Liberal Arts and Sciences/Liberal Studies (24.0101)	0	0	0	95	0	0	0
James Madison Univ	Biology, General (26.0101)	0	0	0	83	0	7	0
James Madison Univ	Mathematics (27.0101)	0	0	0	27	0	0	0
James Madison Univ	Science, Tech. and Society (30.1501)	0	0	0	165	0	5	0
James Madison Univ	Health and Physical Education, General (31.0501)	0	0	0	131	0	19	0
James Madison Univ	Philosophy and Religion (38.9999)	0	0	0	18	0	0	0
James Madison Univ	Chemistry, General (40.0501)	0	0	0	14	0	0	0
James Madison Univ	Geology (40.0601)	0	0	0	14	0	0	0
James Madison Univ	Physics, General (40.0801)	0	0	0	9	0	0	0
James Madison Univ	School Psychology (42.1701)	0	0	0	0	0	9	0
James Madison Univ	Public Administration (44.0401)	0	0	0	32	0	7	0
James Madison Univ	Social Work (44.0701)	0	0	0	32	0	0	0

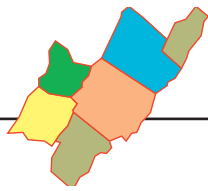
¹ Source: State Council of Higher Education for Virginia, Research Report C1, Completion Summary. Where data for 2002-2003 were not available, 2001-2002 data have been used.

Education Profile

WIA IV



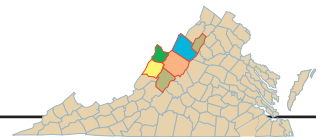
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
James Madison Univ	History, General (45.0801)	0	0	0	56	0	11	0
James Madison Univ	Geography (45.0701)	0	0	0	27	0	0	0
James Madison Univ	Anthropology (45.0201)	0	0	0	35	0	0	0
James Madison Univ	Economics, General (45.0601)	0	0	0	34	0	0	0
James Madison Univ	Social Sciences, General (45.0101)	0	0	0	55	0	0	0
James Madison Univ	Sociology (45.1101)	0	0	0	96	0	0	0
James Madison Univ	Political Science, General (45.1001)	0	0	0	93	0	0	0
James Madison Univ	International Relations and Affairs (45.0901)	0	0	0	39	0	0	0
James Madison Univ	Drama/Theater Arts, General (50.0501)	0	0	0	33	0	0	0
James Madison Univ	Art, General (50.0701)	0	0	0	123	0	5	0
James Madison Univ	Art History, Criticism and Conservation (50.0703)	0	0	0	15	0	0	0
James Madison Univ	Music - General Performance (50.0903)	0	0	0	72	0	14	0
James Madison Univ	Community Health Liaison (51.0301)	0	0	0	192	0	0	0
James Madison Univ	Nursing (R.N. Training) (51.1601)	0	0	0	48	0	0	0
James Madison Univ	Financial Management and Services, Other (52.0899)	0	0	0	2	0	0	0
James Madison Univ	Finance, General (52.0801)	0	0	0	155	0	0	0
James Madison Univ	Hotel/Motel and Restaurant Manage- ment (52.0902)	0	0	0	48	0	0	0
James Madison Univ	Business/Managerial Economics (52.0601)	0	0	0	10	0	0	0
James Madison Univ	Accounting (52.0301)	0	0	0	74	0	6	0
James Madison Univ	Business Administration and Manage- ment, General (52.0201)	0	0	0	69	0	31	0
James Madison Univ	Business Marketing and Marketing Management (52.1401)	0	0	0	234	0	0	0
James Madison Univ	International Business (52.1101)	0	0	0	47	0	0	0
Virginia Military Inst.	Computer Science (11.0701)	0	0	0	15	0	0	0
Virginia Military Inst.	Mechanical Engineering (14.1901)	0	0	0	18	0	0	0
Virginia Military Inst.	Civil Engineering, General (14.0801)	0	0	0	29	0	0	0
Virginia Military Inst.	Electrical, Electronics and Communica- tion Engineering (14.1001)	0	0	0	12	0	0	0
Virginia Military Inst.	Foreign Languages and Literatures, General (16.0101)	0	0	0	4	0	0	0
Virginia Military Inst.	English Language and Literature, General (23.0101)	0	0	0	19	0	0	0
Virginia Military Inst.	Biology, General (26.0101)	0	0	0	12	0	0	0
Virginia Military Inst.	Mathematics (27.0101)	0	0	0	1	0	0	0
Virginia Military Inst.	Chemistry, General (40.0501)	0	0	0	6	0	0	0
Virginia Military Inst.	Physics, General (40.0801)	0	0	0	3	0	0	0
Virginia Military Inst.	Psychology, General (42.0101)	0	0	0	21	0	0	0
Virginia Military Inst.	Economics, General (45.0601)	0	0	0	66	0	0	0
Virginia Military Inst.	International Relations and Affairs (45.0901)	0	0	0	27	0	0	0



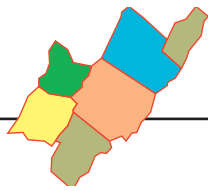
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Virginia Military Inst.	History, General (45.0801)	0	0	0	53	0	0	0
Blue Ridge CC	Agricultural Business and Management, Other (01.0199)	0	0	60	0	0	0	0
Blue Ridge CC	Industrial/Manufacturing Tech./Techni- cian (15.0603)	0	0	1	0	0	0	0
Blue Ridge CC	Electrical and Electronic Engin.-Related Technol./Technicians, Other (15.0399)	0	0	7	0	0	0	0
Blue Ridge CC	Mechanical Engineering-Related Technol./Technicians, Other (15.0899)	0	1	9	0	0	0	0
Blue Ridge CC	Industrial Production Technol./Techni- cians, Other (15.0699)	0	1	0	0	0	0	0
Blue Ridge CC	Liberal Art and Sciences, General Stud- ies and Humanities, Other (24.0199)	0	0	186	0	0	0	0
Blue Ridge CC	Protective Services, Other (43.9999)	0	3	5	0	0	0	0
Blue Ridge CC	Vehicle and Mobile Equipment Mechan- ics and Repairers, Other (47.0699)	0	8	0	0	0	0	0
Blue Ridge CC	Psychiatric/Mental Health Services Technician (51.1502)	0	0	10	0	0	0	0
Blue Ridge CC	Mental Health Services, Other (51.1599)	49	0	0	0	0	0	0
Blue Ridge CC	Nursing (R.N. Training) (51.1601)	0	0	45	0	0	0	0
Blue Ridge CC	Business, General (52.0101)	0	5	35	0	0	0	0
Blue Ridge CC	Management Information Systems and Business Data Processing, General (52.1201)	0	0	21	0	0	0	0
Bridgewater College	Communications, General (09.0101)	0	0	0	18	0	0	0
Bridgewater College	Computer Science (11.0701)	0	0	0	6	0	0	0
Bridgewater College	Physical Education Teaching and Coach- ing (13.1314)	0	0	0	5	0	0	0
Bridgewater College	Chemistry Teacher Education (13.1323)	0	0	0	1	0	0	0
Bridgewater College	Biology Teacher Education (13.1322)	0	0	0	1	0	0	0
Bridgewater College	Social Studies Teacher Education (13.1318)	0	0	0	4	0	0	0
Bridgewater College	Music Teacher Education (13.1312)	0	0	0	4	0	0	0
Bridgewater College	Home Economics Teacher Education (Vocational) (13.1308)	0	0	0	5	0	0	0
Bridgewater College	Mathematics Teacher Education (13.1311)	0	0	0	2	0	0	0
Bridgewater College	English Teacher Education (13.1305)	0	0	0	3	0	0	0
Bridgewater College	Spanish Language and Literature (16.0905)	0	0	0	2	0	0	0
Bridgewater College	Home Economics, General (19.0101)	0	0	0	13	0	0	0
Bridgewater College	English Language and Literature, General (23.0101)	0	0	0	1	0	0	0
Bridgewater College	Liberal Arts and Sciences/Liberal Studies (24.0101)	0	0	0	11	0	0	0
Bridgewater College	Biology, General (26.0101)	0	0	0	41	0	0	0
Bridgewater College	Mathematics (27.0101)	0	0	0	1	0	0	0

Education Profile

WIA IV



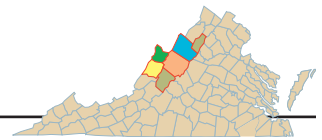
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Bridgewater College	Exercise Sciences/Physiology and Movement Studies (31.0505)	0	0	0	9	0	0	0
Bridgewater College	Health and Physical Education/Fitness, Other (31.0599)	0	0	0	4	0	0	0
Bridgewater College	Health and Physical Education, General (31.0501)	0	0	0	10	0	0	0
Bridgewater College	Athletic Training and Sports Medicine (31.0503)	0	0	0	6	0	0	0
Bridgewater College	Philosophy and Religion (38.9999)	0	0	0	3	0	0	0
Bridgewater College	Physical Sciences, General (40.0101)	0	0	0	1	0	0	0
Bridgewater College	Chemistry, General (40.0501)	0	0	0	1	0	0	0
Bridgewater College	Psychology, General (42.0101)	0	0	0	30	0	0	0
Bridgewater College	History, General (45.0801)	0	0	0	5	0	0	0
Bridgewater College	Economics, General (45.0601)	0	0	0	1	0	0	0
Bridgewater College	International Relations and Affairs (45.0901)	0	0	0	4	0	0	0
Bridgewater College	Sociology (45.1101)	0	0	0	3	0	0	0
Bridgewater College	Political Science, General (45.1001)	0	0	0	4	0	0	0
Bridgewater College	Social Sciences and History, Other (45.9999)	0	0	0	4	0	0	0
Bridgewater College	Music, General (50.0901)	0	0	0	1	0	0	0
Bridgewater College	Art, General (50.0701)	0	0	0	4	0	0	0
Bridgewater College	Business Administration and Management, General (52.0201)	0	0	0	42	0	0	0
Bridgewater College	Management Information Systems and Business Data Processing, General (52.1201)	0	0	0	19	0	0	0
Eastern Mennonite College	International Agriculture (01.0701)	0	0	0	1	0	0	0
Eastern Mennonite College	Environmental Science/Studies (03.0102)	0	0	0	1	0	0	0
Eastern Mennonite College	Communications, General (09.0101)	0	0	0	2	0	0	0
Eastern Mennonite College	Computer Systems Analysis (11.0501)	0	0	0	7	0	0	0
Eastern Mennonite College	Computer Science (11.0701)	0	0	0	4	0	0	0
Eastern Mennonite College	Curriculum and Instruction (13.0301)	0	0	0	0	0	19	0
Eastern Mennonite College	Physical Education Teaching and Coaching (13.1314)	0	0	0	4	0	0	0
Eastern Mennonite College	French Language and Literature (16.0901)	0	0	0	1	0	0	0
Eastern Mennonite College	German Language and Literature (16.0501)	0	0	0	1	0	0	0
Eastern Mennonite College	Spanish Language and Literature (16.0905)	0	0	0	2	0	0	0



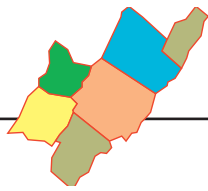
Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Eastern Mennonite College	English Language and Literature, General (23.0101)	0	0	0	8	0	0	0
Eastern Mennonite College	Liberal Arts and Sciences/Liberal Studies (24.0101)	0	0	0	41	0	0	0
Eastern Mennonite College	General Studies (24.0102)	0	0	1	0	0	0	0
Eastern Mennonite College	Biology, General (26.0101)	0	0	0	16	0	0	0
Eastern Mennonite College	Mathematics (27.0101)	0	0	0	4	0	0	0
Eastern Mennonite College	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	6	0	0	0
Eastern Mennonite College	Peace and Conflict Studies (30.0501)	0	0	0	4	0	30	0
Eastern Mennonite College	Sport and Fitness Administration/Management (31.0504)	0	0	0	4	0	0	0
Eastern Mennonite College	Philosophy and Religion (38.9999)	0	0	0	2	0	0	0
Eastern Mennonite College	Bible/Biblical Studies (39.0201)	0	0	2	1	0	0	0
Eastern Mennonite College	Divinity/Ministry (B.D., M.Div.) (39.0602)	0	0	0	0	13	0	0
Eastern Mennonite College	Theology/Theological Studies (39.0601)	0	0	0	4	0	1	0
Eastern Mennonite College	Chemistry, General (40.0501)	0	0	0	2	0	0	0
Eastern Mennonite College	Psychology, General (42.0101)	0	0	0	8	0	0	0
Eastern Mennonite College	Counseling Psychology (42.0601)	0	0	0	0	0	8	0
Eastern Mennonite College	Social Work (44.0701)	0	0	0	16	0	0	0
Eastern Mennonite College	Sociology (45.1101)	0	0	0	4	0	0	0
Eastern Mennonite College	History, General (45.0801)	0	0	0	2	0	0	0
Eastern Mennonite College	Economics, General (45.0601)	0	0	0	1	0	0	0
Eastern Mennonite College	Social Sciences, General (45.0101)	0	0	0	6	0	0	0
Eastern Mennonite College	Art, General (50.0701)	0	0	0	4	0	0	0
Eastern Mennonite College	Music, General (50.0901)	0	0	0	2	0	0	0
Eastern Mennonite College	Drama/Theater Arts, General (50.0501)	0	0	0	2	0	0	0
Eastern Mennonite College	Nursing (R.N. Training) (51.1601)	0	0	0	33	0	0	0
Eastern Mennonite College	Business Administration and Management, General (52.0201)	0	0	0	21	0	6	0

Education Profile

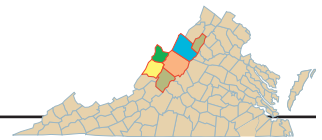
WIA IV



Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Eastern Mennonite College	Accounting (52.0301)	0	0	0	4	0	0	0
Eastern Mennonite College	Organizational Behavior Studies (52.1003)	0	0	0	50	0	0	0
Eastern Mennonite College	International Business (52.1101)	0	0	0	1	0	0	0
Mary Baldwin College	Asian Studies (05.0103)	0	0	0	3	0	0	0
Mary Baldwin College	Communications, Other (09.9999)	0	0	0	7	0	0	0
Mary Baldwin College	Communications, General (09.0101)	0	0	0	10	0	0	0
Mary Baldwin College	Computer and Information Sciences, General (11.0101)	0	0	0	8	0	0	0
Mary Baldwin College	Elementary Teacher Education (13.1202)	0	0	0	0	0	23	0
Mary Baldwin College	French Language and Literature (16.0901)	0	0	0	1	0	0	0
Mary Baldwin College	Spanish Language and Literature (16.0905)	0	0	0	2	0	0	0
Mary Baldwin College	English Language and Literature, General (23.0101)	0	0	0	16	0	0	0
Mary Baldwin College	Biology, General (26.0101)	0	0	0	6	0	0	0
Mary Baldwin College	Mathematics (27.0101)	0	0	0	3	0	0	0
Mary Baldwin College	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	4	0	0	0
Mary Baldwin College	Mathematics and Computer Science (30.0801)	0	0	0	2	0	0	0
Mary Baldwin College	Philosophy and Religion (38.9999)	0	0	0	4	0	0	0
Mary Baldwin College	Chemistry, General (40.0501)	0	0	0	2	0	0	0
Mary Baldwin College	Psychology, General (42.0101)	0	0	0	58	0	0	0
Mary Baldwin College	Social Work (44.0701)	0	0	0	7	0	0	0
Mary Baldwin College	History, General (45.0801)	0	0	0	19	0	0	0
Mary Baldwin College	Economics, General (45.0601)	0	0	0	6	0	0	0
Mary Baldwin College	Political Science, General (45.1001)	0	0	0	14	0	0	0
Mary Baldwin College	International Relations and Affairs (45.0901)	0	0	0	1	0	0	0
Mary Baldwin College	Sociology (45.1101)	0	0	0	19	0	0	0
Mary Baldwin College	Music, General (50.0901)	0	0	0	2	0	0	0
Mary Baldwin College	Art, General (50.0701)	0	0	0	20	0	0	0
Mary Baldwin College	Dramatic/Theater Arts and Stagecraft, Other (50.0599)	0	0	0	0	0	4	0
Mary Baldwin College	Drama/Theater Arts, General (50.0501)	0	0	0	5	0	0	0
Mary Baldwin College	Health System/Health Services Administration (51.0701)	0	0	0	3	0	0	0
Mary Baldwin College	Business Administration and Management, General (52.0201)	0	0	0	38	0	0	0
Washington and Lee Univ	East Asian Studies (05.0104)	0	0	0	1	0	0	0
Washington and Lee Univ	Journalism (09.0401)	0	0	0	26	0	0	0
Washington and Lee Univ	Computer and Information Sciences, General (11.0101)	0	0	0	10	0	0	0

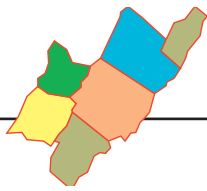


Institution	Program (CIP Code)	Cert. <1 yr.	Cert. >1 <2 yr.	Assoc.	BA	1st Prof.	MA	PH.D.
Washington and Lee Univ	Chemical Engineering (14.0701)	0	0	0	2	0	0	0
Washington and Lee Univ	Engineering Physics (14.1201)	0	0	0	6	0	0	0
Washington and Lee Univ	Spanish Language and Literature (16.0905)	0	0	0	7	0	0	0
Washington and Lee Univ	Classics and Classical Languages and Literatures (16.1201)	0	0	0	2	0	0	0
Washington and Lee Univ	French Language and Literature (16.0901)	0	0	0	10	0	0	0
Washington and Lee Univ	Foreign Languages and Literatures, General (16.0101)	0	0	0	1	0	0	0
Washington and Lee Univ	German Language and Literature (16.0501)	0	0	0	1	0	0	0
Washington and Lee Univ	Law (LL.B., J.D.) (22.0101)	0	0	0	0	116	0	0
Washington and Lee Univ	English Language and Literature, General (23.0101)	0	0	0	18	0	0	0
Washington and Lee Univ	Biology, General (26.0101)	0	0	0	27	0	0	0
Washington and Lee Univ	Neuroscience (26.0608)	0	0	0	6	0	0	0
Washington and Lee Univ	Mathematics (27.0101)	0	0	0	14	0	0	0
Washington and Lee Univ	Medieval and Renaissance Studies (30.1301)	0	0	0	1	0	0	0
Washington and Lee Univ	Multi/Interdisciplinary Studies, Other (30.9999)	0	0	0	2	0	0	0
Washington and Lee Univ	Religion/Religious Studies (38.0201)	0	0	0	3	0	0	0
Washington and Lee Univ	Philosophy (38.0101)	0	0	0	12	0	0	0
Washington and Lee Univ	Geology (40.0601)	0	0	0	10	0	0	0
Washington and Lee Univ	Chemistry, General (40.0501)	0	0	0	10	0	0	0
Washington and Lee Univ	Physics, General (40.0801)	0	0	0	1	0	0	0
Washington and Lee Univ	Psychology, General (42.0101)	0	0	0	11	0	0	0
Washington and Lee Univ	Public Policy Analysis (44.0501)	0	0	0	5	0	0	0
Washington and Lee Univ	Economics, General (45.0601)	0	0	0	52	0	0	0
Washington and Lee Univ	Anthropology (45.0201)	0	0	0	2	0	0	0
Washington and Lee Univ	Sociology (45.1101)	0	0	0	8	0	0	0
Washington and Lee Univ	History, General (45.0801)	0	0	0	48	0	0	0
Washington and Lee Univ	Political Science, General (45.1001)	0	0	0	28	0	0	0
Washington and Lee Univ	Music, General (50.0901)	0	0	0	1	0	0	0
Washington and Lee Univ	Art History, Criticism and Conservation (50.0703)	0	0	0	5	0	0	0
Washington and Lee Univ	Fine/Studio Arts (50.0702)	0	0	0	6	0	0	0
Washington and Lee Univ	Drama/Theater Arts, General (50.0501)	0	0	0	1	0	0	0
Washington and Lee Univ	Business Administration and Manage- ment, General (52.0201)	0	0	0	53	0	0	0
Washington and Lee Univ	Accounting (52.0301)	0	0	0	28	0	0	0
James Madison Univ	Speech-Language Pathology (51.0203)	0	0	0	53	0	31	3
James Madison Univ	Psychology, General (42.0101)	0	0	0	221	0	6	6



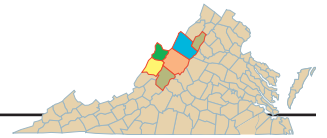
WIA IV Training Providers List

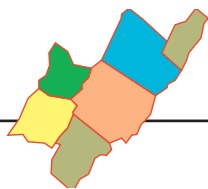
Provider Name	Contact Information	List of Programs/Courses
Blue Ridge Community College	1 College lane Rt. 11 Weyers Cave VA 24486 Phone: 540-234-9261 Web: www.br.cc.va.us	A+ Core and Software Test Preparation Automotive Analysis and Repair Basic Office Skills Business Technologies Certified Novell Administrator (CNA) Certified Nursing Assistant Computer Application for Professionals Computer Network Technologies Computer-Aided Drafting Basic Certificate Engineering and Industrial Technologies Health and Human Services Technologies Leadership and Supervision Medical Office Assistant Program MOUS Expert Certification MOUS Master Certification Network+ Quality Assurance Tractor Trailer Driving School Veterinary Assisting
Mary Baldwin College	Mary Baldwin College Staunton VA 24401 Phone: 540-343-7206 Email: roanadp@mbc.edu Web: www.mbc.edu/adp	College Courses
Massanutten Technical Center	325 Pleasant Valley Road Harrisonburg VA 22801 Phone: 540-434-5962 Email: scoombs@rockingham.k12.va.us Web: www.rockingham.k12.va.us/MTC.html	Business Education Health Occupations Education Trade and Industrial Education
National College of Business and Technology	51B Burgess Road Harrisonburg VA 22801 Phone: 540-432-0943 Email: adm@educorp.edu Web: www.ncbt.edu	Accounting Administrative Office Professional Administrative Office Specialist Business Administration Business Administration Accounting Business Administration Management Computer Applications Technology Computerized Office Applications Medical Assisting Medical Billing and Coding Medical Transcription Pharmacy Technician
Page County Technical Center	525 Middleburg Road Luray VA 22835 Phone: 540-778-7282 Email: psecrist@pagecounty.k12.va.us Web: www.pagecounty.k12.va.us/pctc	Business and Computer Technology Certified Nursing Assistant Practical Nursing



WIA IV Training Providers List (continued)

Provider Name	Contact Information	List of Programs/Courses
Valley Vocational-Technical Center	49 Hornet Rd Fishersville VA 22939 Phone: 540-245-5002 Email: wjcraig@cfw.com Web: www.vvtc.tec.va.us	Agricultural Education Business Education Health Occupations Education Trade & Industrial Education
Woodrow Wilson Rehabilitation Center	PO Box 1500 Fishersville VA 22939-1500 Phone: 540-332-7230 Email: trossikh@wwrc.state.va.us Web: www.wwrc.state.va.us	Auto Mechanics Building Trades Business Education Computer Skills Training Drafting CAD Operator Electronics Technology External Training Option Food Service Health Occupations Materials Management





V. Summary and Conclusions

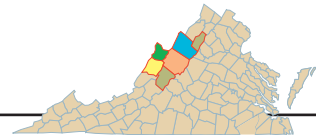
Population trends in WIA IV, as in other parts of the United States, are currently dominated by the aging of the baby-boom generation. Between 2000 and 2010 this demographic phenomena will cause a major increase in the 55 and over population within the region. The net result of this increase will be a significant “graying” of the overall population.

One implication of this is that younger entry-level workers will be in short supply. This should elevate the importance of workforce services in facilitating the efficient and effective use of existing labor resources by getting younger trained workers into the workforce, and retraining or upgrading the skills of older displaced workers.

Another significant trend within WIA IV has to do with relatively flat employment growth in Manufacturing (the largest employment sector in the local economy), coupled with increasing employment in Services (especially health care and education) and Retail Trade.

One implication of this shift in employment away from Manufacturing and toward Services and Retail Trade is likely to be downward pressure on wages. Whereas Manufacturing comprised the 6th highest wage sector in the local economy, Retail Trade ranks 18th, Health 13th, and Education 11th.

Finally, it is important to note the likely effect that a shift away from Manufacturing and toward Services and Retail Trade will have on the occupation-driven demand for training and worker skills. As demonstrated in this report, it can be anticipated that employment increases in the Service sector – specifically, health care and education – are likely to account for much of the demand for trained workers between 1998 and 2008. These employment increases are also likely to place upward pressure on required worker skills in *locating information, reading for information, and writing*.



Average Weekly Wage

Augusta County

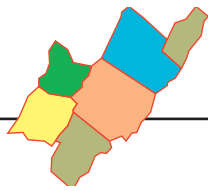
INDUSTRY SECTOR	2002 (\$)
****TOTAL****	572
AGRICULTURE	388
MINING	D
UTILITIES	D
CONSTRUCTION	504
MANUFACTURING	724
TRADE-WHOLESALE	632
TRADE-RETAIL	397
TRANSPORTATION	620
INFORMATION	673
FINANCE/INSURNC	552
REAL ESTATE	338
PROF/TECH SERV	465
MANAGMNT OF COS	D
ADMIN/WASTE SER	321
EDUCATIONAL SER	462
HEALTH CARE	631
ARTS/ENTER/REC	192
ACCOMMDATN/FOOD	211
OTHER SERVICES	347
GOVT TOTAL	542
GOVT FEDERAL	610
GOVT STATE	594
GOVT LOCAL	490
UNCLASSIFIED	0

Bath County

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	494
AGRICULTURE	630
MINING	D
UTILITIES	D
CONSTRUCTION	489
MANUFACTURING	494
TRADE-WHOLESALE	477
TRADE-RETAIL	241
TRANSPORTATION	D
INFORMATION	713
FINANCE/INSURNC	D
REAL ESTATE	1,092
PROF/TECH SERV	386
MANAGMNT OF COS	D
ADMIN/WASTE SER	655
EDUCATIONAL SER	D
HEALTH CARE	537
ARTS/ENTER/REC	2,624
ACCOMMDATN/FOOD	D
OTHER SERVICES	307
GOVT TOTAL	460
GOVT FEDERAL	644
GOVT STATE	369
GOVT LOCAL	451
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

Highland County

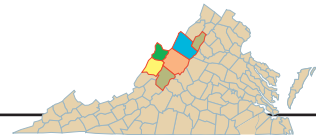
INDUSTRY SECTOR	2002 (\$)
****TOTAL****	355
AGRICULTURE	324
MINING	D
UTILITIES	D
CONSTRUCTION	415
MANUFACTURING	408
TRADE-WHOLESALE	235
TRADE-RETAIL	215
TRANSPORTATION	393
INFORMATION	423
FINANCE/INSURNC	602
REAL ESTATE	D
PROF/TECH SERV	244
MANAGMNT OF COS	D
ADMIN/WASTE SER	D
EDUCATIONAL SER	D
HEALTH CARE	D
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	132
OTHER SERVICES	284
GOVT TOTAL	380
GOVT FEDERAL	439
GOVT STATE	530
GOVT LOCAL	358
UNCLASSIFIED	0

Page County

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	432
AGRICULTURE	445
MINING	D
UTILITIES	D
CONSTRUCTION	422
MANUFACTURING	466
TRADE-WHOLESALE	443
TRADE-RETAIL	305
TRANSPORTATION	D
INFORMATION	581
FINANCE/INSURNC	460
REAL ESTATE	231
PROF/TECH SERV	525
MANAGMNT OF COS	D
ADMIN/WASTE SER	383
EDUCATIONAL SER	D
HEALTH CARE	439
ARTS/ENTER/REC	418
ACCOMMDATN/FOOD	194
OTHER SERVICES	336
GOVT TOTAL	549
GOVT FEDERAL	693
GOVT STATE	604
GOVT LOCAL	507
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

Rockbridge County

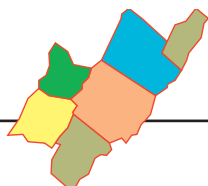
INDUSTRY SECTOR	2002 (\$)
****TOTAL****	461
AGRICULTURE	344
MINING	D
UTILITIES	D
CONSTRUCTION	500
MANUFACTURING	545
TRADE-WHOLESALE	520
TRADE-RETAIL	347
TRANSPORTATION	963
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	308
PROF/TECH SERV	388
MANAGMNT OF COS	D
ADMIN/WASTE SER	323
EDUCATIONAL SER	D
HEALTH CARE	390
ARTS/ENTER/REC	311
ACCOMMDATN/FOOD	225
OTHER SERVICES	381
GOVT TOTAL	564
GOVT FEDERAL	593
GOVT STATE	640
GOVT LOCAL	536
UNCLASSIFIED	0

Rockingham County

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	541
AGRICULTURE	402
MINING	D
UTILITIES	D
CONSTRUCTION	605
MANUFACTURING	674
TRADE-WHOLESALE	642
TRADE-RETAIL	363
TRANSPORTATION	574
INFORMATION	517
FINANCE/INSURNC	497
REAL ESTATE	539
PROF/TECH SERV	762
MANAGMNT OF COS	569
ADMIN/WASTE SER	400
EDUCATIONAL SER	550
HEALTH CARE	398
ARTS/ENTER/REC	269
ACCOMMDATN/FOOD	229
OTHER SERVICES	401
GOVT TOTAL	509
GOVT FEDERAL	743
GOVT STATE	675
GOVT LOCAL	476
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Average Weekly Wage

Buena Vista city

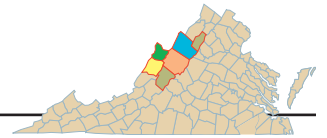
INDUSTRY SECTOR	2002 (\$)
****TOTAL****	496
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	339
MANUFACTURING	709
TRADE-WHOLESALE	D
TRADE-RETAIL	334
TRANSPORTATION	D
INFORMATION	D
FINANCE/INSURNC	464
REAL ESTATE	258
PROF/TECH SERV	647
MANAGMNT OF COS	D
ADMIN/WASTE SER	D
EDUCATIONAL SER	D
HEALTH CARE	412
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	242
OTHER SERVICES	332
GOVT TOTAL	479
GOVT FEDERAL	657
GOVT STATE	632
GOVT LOCAL	451
UNCLASSIFIED	0

Harrisonburg city

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	526
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	572
MANUFACTURING	628
TRADE-WHOLESALE	590
TRADE-RETAIL	394
TRANSPORTATION	570
INFORMATION	674
FINANCE/INSURNC	755
REAL ESTATE	475
PROF/TECH SERV	689
MANAGMNT OF COS	D
ADMIN/WASTE SER	307
EDUCATIONAL SER	161
HEALTH CARE	647
ARTS/ENTER/REC	125
ACCOMMDATN/FOOD	197
OTHER SERVICES	349
GOVT TOTAL	624
GOVT FEDERAL	848
GOVT STATE	655
GOVT LOCAL	539
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



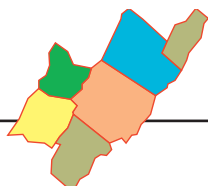
Average Weekly Wage

Lexington city

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	532
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	577
MANUFACTURING	249
TRADE-WHOLESALE	D
TRADE-RETAIL	322
TRANSPORTATION	D
INFORMATION	341
FINANCE/INSURNC	810
REAL ESTATE	374
PROF/TECH SERV	520
MANAGMNT OF COS	D
ADMIN/WASTE SER	383
EDUCATIONAL SER	D
HEALTH CARE	504
ARTS/ENTER/REC	327
ACCOMMDATN/FOOD	256
OTHER SERVICES	476
GOVT TOTAL	625
GOVT FEDERAL	696
GOVT STATE	689
GOVT LOCAL	457
UNCLASSIFIED	0

Staunton city

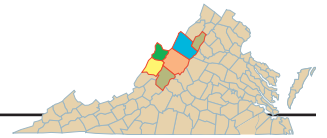
INDUSTRY SECTOR	2002 (\$)
****TOTAL****	463
AGRICULTURE	D
MINING	D
UTILITIES	998
CONSTRUCTION	575
MANUFACTURING	624
TRADE-WHOLESALE	398
TRADE-RETAIL	332
TRANSPORTATION	587
INFORMATION	653
FINANCE/INSURNC	645
REAL ESTATE	418
PROF/TECH SERV	590
MANAGMNT OF COS	D
ADMIN/WASTE SER	351
EDUCATIONAL SER	541
HEALTH CARE	595
ARTS/ENTER/REC	349
ACCOMMDATN/FOOD	202
OTHER SERVICES	341
GOVT TOTAL	556
GOVT FEDERAL	862
GOVT STATE	619
GOVT LOCAL	469
UNCLASSIFIED	0



Average Weekly Wage

Waynesboro city

INDUSTRY SECTOR	2002 (\$)
****TOTAL****	599
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	580
MANUFACTURING	815
TRADE-WHOLESALE	889
TRADE-RETAIL	375
TRANSPORTATION	916
INFORMATION	D
FINANCE/INSURNC	809
REAL ESTATE	389
PROF/TECH SERV	690
MANAGMNT OF COS	D
ADMIN/WASTE SER	330
EDUCATIONAL SER	D
HEALTH CARE	498
ARTS/ENTER/REC	354
ACCOMMDATN/FOOD	200
OTHER SERVICES	345
GOVT TOTAL	545
GOVT FEDERAL	831
GOVT STATE	671
GOVT LOCAL	507
UNCLASSIFIED	0



Unemployment Rate Trends

Augusta County

Year	Rate
2002	3.1
2001	2.7
2000	1.6
1999	2.4
1998	2.2

Year	Rate
1997	3.1
1996	3.9
1995	5.9
1994	5.2
1993	4.6

Bath County

Year	Rate
2002	4.7
2001	4.7
2000	3.2
1999	4.7
1998	6.2

Year	Rate
1997	6.6
1996	7.0
1995	9.4
1994	13.7
1993	9.2

Highland County

Year	Rate
2002	2.6
2001	2.3
2000	2.8
1999	2.6
1998	3.4

Year	Rate
1997	6.7
1996	8.8
1995	8.5
1994	4.5
1993	4.8

Page County

Year	Rate
2002	6.9
2001	3.6
2000	2.7
1999	4.0
1998	4.9

Year	Rate
1997	5.8
1996	7.1
1995	7.5
1994	6.9
1993	7.3

Rockbridge County

Year	Rate
2002	2.7
2001	2.6
2000	1.7
1999	2.1
1998	2.2

Year	Rate
1997	3.3
1996	4.4
1995	5.0
1994	5.7
1993	7.5

Rockingham County

Year	Rate
2002	2.7
2001	1.9
2000	0.9
1999	1.3
1998	1.3

Year	Rate
1997	1.8
1996	2.7
1995	3.1
1994	3.0
1993	3.5

Buena Vista city

Year	Rate
2002	4.2
2001	3.5
2000	1.9
1999	2.6
1998	2.7

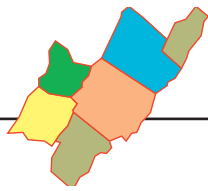
Year	Rate
1997	4.6
1996	6.1
1995	5.8
1994	6.0
1993	12.2

Harrisonburg city

Year	Rate
2002	2.1
2001	1.8
2000	1.0
1999	1.3
1998	1.4

Year	Rate
1997	1.8
1996	2.5
1995	2.3
1994	2.3
1993	3.0

Source: Local Area Unemployment Statistics.



Unemployment Rate Trends

Lexington city

Year	Rate
2002	2.3
2001	1.8
2000	1.2
1999	1.5
1998	1.8

Year	Rate
1997	2.0
1996	2.8
1995	2.8
1994	3.6
1993	4.8

Staunton city

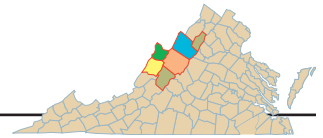
Year	Rate
2002	3.7
2001	2.7
2000	1.9
1999	2.3
1998	2.4

Year	Rate
1997	3.5
1996	4.8
1995	5.1
1994	5.3
1993	4.5

Waynesboro city

Year	Rate
2002	4.8
2001	4.1
2000	2.6
1999	2.9
1998	2.9

Year	Rate
1997	4.5
1996	4.5
1995	5.1
1994	5.6
1993	6.9



Population by Age

Augusta County

	1990	2000	2010	2020	2030
0-14	11,145	12,774	12,299	15,554	14,796
15-24	7,146	7,314	6,898	5,501	9,972
25-34	9,182	8,130	11,250	9,023	5,842
35-44	9,116	11,414	7,277	12,420	12,486
45-54	6,695	10,274	11,813	6,419	11,547
55+	11,393	15,709	21,764	27,183	26,257
Total	54,677	65,615	71,300	76,100	80,900

Bath County

	1990	2000	2010	2020	2030
0-14	830	871	858	1,205	1,220
15-24	649	468	620	494	794
25-34	670	604	837	886	615
35-44	652	822	558	886	1,081
45-54	670	754	775	463	655
55+	1,328	1,529	1,450	1,366	1,035
Total	4,799	5,048	5,100	5,300	5,400

Highland County

	1990	2000	2010	2020	2030
0-14	477	401	255	276	288
15-24	239	206	234	139	176
25-34	379	218	255	252	180
35-44	403	403	228	228	238
45-54	317	420	409	214	226
55+	820	888	1,119	1,291	1,293
Total	2,635	2,536	2,500	2,400	2,400

Page County

	1990	2000	2010	2020	2030
0-14	4,236	4,364	4,305	4,378	4,489
15-24	2,844	2,749	2,593	2,611	2,850
25-34	3,369	2,991	2,489	2,458	2,598
35-44	3,165	3,573	3,227	2,727	2,682
45-54	2,516	3,251	3,615	3,364	2,883
55+	5,560	6,249	7,772	9,162	9,898
Total	21,690	23,177	24,000	24,700	25,400

Rockbridge County

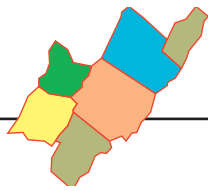
	1990	2000	2010	2020	2030
0-14	3,425	3,741	3,591	3,736	3,958
15-24	2,503	2,525	2,755	2,906	3,003
25-34	2,783	2,421	2,956	3,331	3,687
35-44	2,725	3,229	2,553	2,036	2,074
45-54	2,232	3,151	3,306	3,122	2,855
55+	4,682	5,741	6,637	7,570	8,022
Total	18,350	20,808	21,800	22,700	23,600

Rockingham County

	1990	2000	2010	2020	2030
0-14	11,818	13,884	12,830	15,181	17,074
15-24	8,116	8,687	9,895	9,336	10,132
25-34	9,309	8,556	11,085	10,682	13,564
35-44	8,857	11,017	10,662	11,232	9,531
45-54	6,405	9,601	10,335	11,248	9,977
55+	12,977	15,980	19,093	22,221	25,522
Total	57,482	67,725	73,900	79,900	85,800

2010 - 2030 data are projections.

Source: Virginia Employment Commission 8/03, U.S. Census Bureau.



Population by Age

Buena Vista city

	1990	2000	2010	2020	2030
0-14	1,102	1,187	928	826	678
15-24	1,122	913	724	588	570
25-34	845	825	723	648	660
35-44	908	827	580	653	774
45-54	713	872	725	600	774
55+	1,716	1,725	2,421	2,685	2,544
Total	6,406	6,349	6,100	6,000	6,000

Harrisonburg city

	1990	2000	2010	2020	2030
0-14	4,060	5,230	5,598	7,025	8,256
15-24	12,140	17,550	20,594	18,661	19,094
25-34	4,329	4,582	6,530	9,492	10,415
35-44	3,140	3,991	3,355	3,108	3,656
45-54	2,061	3,250	3,524	3,758	3,554
55+	4,977	5,850	7,000	8,756	9,826
Total	30,707	40,453	46,600	50,800	54,800

Lexington city

	1990	2000	2010	2020	2030
0-14	658	613	553	613	655
15-24	3,071	2,985	2,992	2,476	2,329
25-34	552	528	655	865	853
35-44	580	470	347	294	319
45-54	500	620	593	588	533
55+	1,598	1,651	1,760	2,064	2,212
Total	6,959	6,867	6,900	6,900	6,900

Staunton city

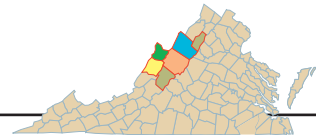
	1990	2000	2010	2020	2030
0-14	4,104	3,857	4,398	3,781	3,241
15-24	3,483	3,313	3,104	2,620	2,999
25-34	3,944	3,104	2,249	2,378	1,809
35-44	3,625	3,531	2,339	2,290	2,280
45-54	2,614	3,345	2,767	2,158	2,236
55+	6,691	6,703	7,642	8,774	9,234
Total	24,461	23,853	22,500	22,000	21,800

Waynesboro city

	1990	2000	2010	2020	2030
0-14	3,561	3,939	3,713	4,121	3,939
15-24	2,443	2,261	2,291	2,317	2,451
25-34	2,915	2,510	2,593	2,112	1,531
35-44	2,476	2,840	2,286	2,112	2,473
45-54	2,106	2,515	2,573	2,747	2,835
55+	5,048	5,455	6,643	7,093	7,571
Total	18,549	19,520	20,100	20,500	20,800

2010 - 2030 data are projections.

Source: Virginia Employment Commission 8/03, U.S. Census Bureau.



Employment by Industry

Augusta County

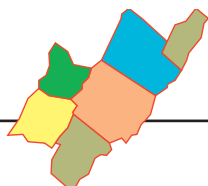
INDUSTRY SECTOR	2002
****TOTAL****	24,829
AGRICULTURE	234
MINING	D
UTILITIES	D
CONSTRUCTION	1,809
MANUFACTURING	6,463
TRADE-WHOLESALE	842
TRADE-RETAIL	1,895
TRANSPORTATION	2,272
INFORMATION	73
FINANCE/INSURNC	217
REAL ESTATE	175
PROF/TECH SERV	341
MANAGMNT OF COS	D
ADMIN/WASTE SER	596
EDUCATIONAL SER	120
HEALTH CARE	2,778
ARTS/ENTER/REC	159
ACCOMMDATN/FOOD	1,146
OTHER SERVICES	360
GOVT TOTAL	4,953
GOVT FEDERAL	165
GOVT STATE	2,292
GOVT LOCAL	2,496
UNCLASSIFIED	0

Bath County

INDUSTRY SECTOR	2002
****TOTAL****	2,299
AGRICULTURE	32
MINING	D
UTILITIES	D
CONSTRUCTION	124
MANUFACTURING	70
TRADE-WHOLESALE	5
TRADE-RETAIL	105
TRANSPORTATION	D
INFORMATION	19
FINANCE/INSURNC	D
REAL ESTATE	16
PROF/TECH SERV	21
MANAGMNT OF COS	D
ADMIN/WASTE SER	19
EDUCATIONAL SER	D
HEALTH CARE	185
ARTS/ENTER/REC	11
ACCOMMDATN/FOOD	D
OTHER SERVICES	48
GOVT TOTAL	418
GOVT FEDERAL	46
GOVT STATE	63
GOVT LOCAL	309
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Highland County

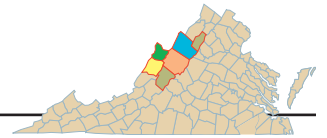
INDUSTRY SECTOR	2002
****TOTAL****	550
AGRICULTURE	42
MINING	D
UTILITIES	D
CONSTRUCTION	44
MANUFACTURING	43
TRADE-WHOLESALE	17
TRADE-RETAIL	35
TRANSPORTATION	19
INFORMATION	58
FINANCE/INSURNC	29
REAL ESTATE	D
PROF/TECH SERV	7
MANAGMNT OF COS	D
ADMIN/WASTE SER	D
EDUCATIONAL SER	D
HEALTH CARE	D
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	39
OTHER SERVICES	33
GOVT TOTAL	161
GOVT FEDERAL	12
GOVT STATE	15
GOVT LOCAL	134
UNCLASSIFIED	0

Page County

INDUSTRY SECTOR	2002
****TOTAL****	6,708
AGRICULTURE	38
MINING	D
UTILITIES	D
CONSTRUCTION	474
MANUFACTURING	2,307
TRADE-WHOLESALE	44
TRADE-RETAIL	773
TRANSPORTATION	D
INFORMATION	45
FINANCE/INSURNC	108
REAL ESTATE	36
PROF/TECH SERV	94
MANAGMNT OF COS	D
ADMIN/WASTE SER	186
EDUCATIONAL SER	D
HEALTH CARE	549
ARTS/ENTER/REC	156
ACCOMMDATN/FOOD	526
OTHER SERVICES	161
GOVT TOTAL	1,127
GOVT FEDERAL	178
GOVT STATE	141
GOVT LOCAL	809
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Rockbridge city

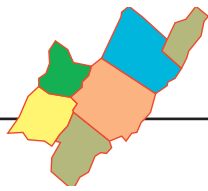
INDUSTRY SECTOR	2002
****TOTAL****	6,691
AGRICULTURE	76
MINING	D
UTILITIES	D
CONSTRUCTION	374
MANUFACTURING	2,126
TRADE-WHOLESALE	99
TRADE-RETAIL	731
TRANSPORTATION	143
INFORMATION	D
FINANCE/INSURNC	D
REAL ESTATE	54
PROF/TECH SERV	50
MANAGMNT OF COS	D
ADMIN/WASTE SER	160
EDUCATIONAL SER	D
HEALTH CARE	196
ARTS/ENTER/REC	316
ACCOMMDATN/FOOD	867
OTHER SERVICES	210
GOVT TOTAL	1,164
GOVT FEDERAL	60
GOVT STATE	277
GOVT LOCAL	828
UNCLASSIFIED	0

Rockingham city

INDUSTRY SECTOR	2002
****TOTAL****	26,247
AGRICULTURE	648
MINING	D
UTILITIES	D
CONSTRUCTION	2,437
MANUFACTURING	9,033
TRADE-WHOLESALE	931
TRADE-RETAIL	2,801
TRANSPORTATION	563
INFORMATION	146
FINANCE/INSURNC	236
REAL ESTATE	525
PROF/TECH SERV	427
MANAGMNT OF COS	227
ADMIN/WASTE SER	434
EDUCATIONAL SER	741
HEALTH CARE	1,255
ARTS/ENTER/REC	156
ACCOMMDATN/FOOD	1,773
OTHER SERVICES	494
GOVT TOTAL	3,321
GOVT FEDERAL	200
GOVT STATE	282
GOVT LOCAL	2,839
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



Employment by Industry

Buena Vista city

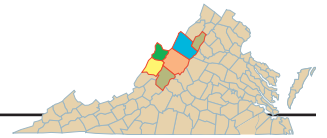
INDUSTRY SECTOR	2002
****TOTAL****	2,484
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	29
MANUFACTURING	881
TRADE-WHOLESALE	D
TRADE-RETAIL	255
TRANSPORTATION	D
INFORMATION	D
FINANCE/INSURNC	26
REAL ESTATE	16
PROF/TECH SERV	67
MANAGMNT OF COS	D
ADMIN/WASTE SER	D
EDUCATIONAL SER	D
HEALTH CARE	165
ARTS/ENTER/REC	D
ACCOMMDATN/FOOD	116
OTHER SERVICES	40
GOVT TOTAL	424
GOVT FEDERAL	42
GOVT STATE	19
GOVT LOCAL	363
UNCLASSIFIED	0

Harrisonburg city

INDUSTRY SECTOR	2002
****TOTAL****	29,912
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	883
MANUFACTURING	5,336
TRADE-WHOLESALE	1,306
TRADE-RETAIL	4,775
TRANSPORTATION	590
INFORMATION	841
FINANCE/INSURNC	691
REAL ESTATE	396
PROF/TECH SERV	866
MANAGMNT OF COS	D
ADMIN/WASTE SER	1,309
EDUCATIONAL SER	53
HEALTH CARE	3,931
ARTS/ENTER/REC	215
ACCOMMDATN/FOOD	3,023
OTHER SERVICES	673
GOVT TOTAL	4,833
GOVT FEDERAL	176
GOVT STATE	3,085
GOVT LOCAL	1,572
UNCLASSIFIED	0

"D" indicates nondisclosed data.

Source: Covered Employment and Wage data, Annualized 2002.



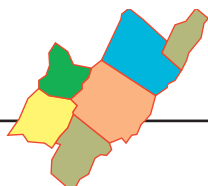
Employment by Industry

Lexington city

INDUSTRY SECTOR	2002
****TOTAL****	4,784
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	103
MANUFACTURING	36
TRADE-WHOLESALE	D
TRADE-RETAIL	689
TRANSPORTATION	D
INFORMATION	90
FINANCE/INSURNC	135
REAL ESTATE	61
PROF/TECH SERV	141
MANAGMNT OF COS	D
ADMIN/WASTE SER	24
EDUCATIONAL SER	D
HEALTH CARE	674
ARTS/ENTER/REC	66
ACCOMMDATN/FOOD	619
OTHER SERVICES	205
GOVT TOTAL	936
GOVT FEDERAL	51
GOVT STATE	626
GOVT LOCAL	259
UNCLASSIFIED	0

Staunton city

INDUSTRY SECTOR	2002
****TOTAL****	11,295
AGRICULTURE	D
MINING	D
UTILITIES	51
CONSTRUCTION	387
MANUFACTURING	296
TRADE-WHOLESALE	470
TRADE-RETAIL	2,025
TRANSPORTATION	354
INFORMATION	278
FINANCE/INSURNC	499
REAL ESTATE	167
PROF/TECH SERV	319
MANAGMNT OF COS	D
ADMIN/WASTE SER	249
EDUCATIONAL SER	489
HEALTH CARE	679
ARTS/ENTER/REC	138
ACCOMMDATN/FOOD	1,402
OTHER SERVICES	519
GOVT TOTAL	2,779
GOVT FEDERAL	122
GOVT STATE	1,285
GOVT LOCAL	1,371
UNCLASSIFIED	0



Employment by Industry

Waynesboro city

INDUSTRY SECTOR	2002
****TOTAL****	10,157
AGRICULTURE	D
MINING	D
UTILITIES	D
CONSTRUCTION	431
MANUFACTURING	3,014
TRADE-WHOLESALE	270
TRADE-RETAIL	1,254
TRANSPORTATION	224
INFORMATION	D
FINANCE/INSURNC	222
REAL ESTATE	150
PROF/TECH SERV	226
MANAGMNT OF COS	D
ADMIN/WASTE SER	478
EDUCATIONAL SER	D
HEALTH CARE	734
ARTS/ENTER/REC	55
ACCOMMDATN/FOOD	840
OTHER SERVICES	382
GOVT TOTAL	1,182
GOVT FEDERAL	50
GOVT STATE	170
GOVT LOCAL	963
UNCLASSIFIED	0